

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

MARC FISHMAN

Plaintiff,

CASE NO. 18-cv-00282-KMK

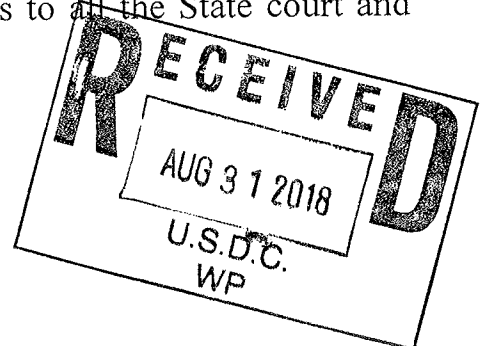
v.

Office of Court Administration New York State Courts

Defendants

PLAINTIFF'S MOTION FOR PRELIMINARY INJUNCTIVE RELIEF &  
DECLARATORY JUDGEMENT  
REQUEST FOR PROMPT HEARING AND INCORPORATED

Plaintiff, MARC FISHMAN, Plaintiff *pro se* herein, in accordance with Rule 65, Federal rules of civil Procedure, requests that this court enter a Preliminary injunction ordering Defendants to provide Plaintiff with reasonable accommodations of "CART" real time transcription services and real time transcripts to insure "meaningful access to all the State court and court services/programs" in the "State" entity.



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Plaintiff, MARC FISHMAN seeks declaratory Judgment against Office of Court Administration New York (the "State Entity") that it's "State" Entity court violated ADA and the Rehabilitation act for failing to allow use of CART closed captioned technology and real time transcription services in State family court. All State courts in New York state have CART technology pursuant to the 2015 state law requiring CART use in the court room. The Office of Court administration denied the use of CART for me in an act of willful disability discrimination for my disabilities. The determination not to allow Cart was made directly by the Office of court administration and not a judge. Pursuant to title two of the ADA, Courts are required to use the preferred method of disability accommodation for the hearing disability from the disabled party. State Court Office of Court Administration rejected my CART use request even though I provided medical proof of my hearing disability of occipital neuralgia (where I have stimulated wires vibrating next to my left ear on electric pulsations, tinnitus and tmj. In addition provided proof from my neurologist and treating concussion doctor brown that the CART would help provide meaningful access to the court proceedings as I understand better with the written closed caption words through sight then hearing with ringing in and by my ears. All of these disabilities in addition to post concussion syndrome and traumatic

brain injury have side effects of ringing in my ear, ear pressure and decreased hearing. In addition, there are no followed grievance procedures for administrative ADA complaints in New York Courts. This violates Federal law CFR 28 35.107 for failure to provide "Prompt and Fair" equitable resolution process to insure timely grievances and are not uniform for its "State" Family court article 6/8 cases compared to non-family "State" Entity court cases. Plaintiff seeks declaratory Judgment that State courts have no timely, prompt and compliant ADA accommodation administrative grievance procedure. Plaintiff also seeks declaratory judgment that the defendants have discriminated against me in failing to provide the reasonable accommodations required of a public "State" Entity access to courthouse and court programs/services in violation of title two of the ADA, New York Human Rights laws and Section 504 of the Rehabilitation Act of 1973 and 28 CFR 35.130 (b) 7, and 28 CFR 35.160.

Plaintiff relies upon my Verified Complaint and amended verified complaint, the attached letter from Dr. Dr Brown of the Cognition Center, the reports from my ENT Doctor Ryback, the report from my TMJ Dr. Gelb, the 2015 state law requiring CART use in the courtroom, and the letter from Disability Rights New York that Cart technology must be used for my

disabilities when the system is readily available in all courtrooms in New York State.

### STATEMENT OF FACTS

The New York Office of Court Administration “State” Entity including its Family Court Division/units repeatedly, and continuously discriminated and continue to discriminate in their operation of “State” Entity Family court entity proceedings against me as an ada qualified disabled man with multiple qualified disabilities including Traumatic Brain Injury, Severe Obstructive Sleep Apnea, Occipital Neuralgia, Post Concussion Syndrome, TMJ, Tinnitus, Cubital Tunnel Syndrome and Peripheral Neuropathy for almost 4 years now.

My disabilities effect the major life/bodily functions of sleeping, eating, and hearing, remembering, registering, organizing and writing.

The “State” family court entity has already acknowledged I am qualified ADA disabled in the court ordered and denial of ADA Accommodations dated January 25, 2017 (see original complaint.) In the order, the court denied a note taker service in the courtroom even though a note taker is required to be provided as an accommodation of a “State” entity in the bulletin. In addition the State is required to utilize CART when a disabled person with hearing issues associates with tinnitus, tmj, occipital

neuralgia and Post concussion syndrome requests the accommodation to better understand and have meaningful access to the court rooms. (See Tennessee versus lane Supreme Court decision 541 US 509 2004.) Nancy Barry of Office of Court administration denied CART in the attached exhibit in violation of ADA title two and the rehabilitation act. In New York State document, “ Procedures for Implementing Reasonable Accommodations in programs and services for individuals with disabilities.” exhibit “D” page 10. On page 10 of the NY State Ada Accommodations bulletin it states, under item 10, Communications, “A State entity shall furnish auxiliary aids and services where necessary to afford individuals with disabilities, including applicants, participants, and members of the public an equal opportunity to participate in and enjoy the benefits of, a service program, or activity of a state entity. Auxiliary aides and services including: CART Closed captioned use. The “State” Family court program of court supervised visitation partially funded with federal and state funds must not discriminate against the disabled under the Rehabilitation act. The program must provide aids to the disabled like me with physical disabilities like cubital tunnel syndrome to provide “meaningful access to courts and court programs”, See Tennessee versus Lane, 541 U.S. 509. New York State courts are “State”

entities that accept Federal funds to operate and therefore may not discriminate under section 504 of the Rehabilitation Act of 1973.

In the June 2018 Federal court appearance, honorable Judge Karas stated, "it is clear Mr. Fishman is disabled under the definition of the ADA. " As a disabled man, the state must reasonably accommodate me with the accommodation of my choice when it will not fundamentally alter the program or service. CART does not alter the functioning or operation of the state court in anyway. The state readily publicizes in press releases that its courtrooms have real time transcription services of CART for the disabled public to access the courtrooms.

In denying the requested Accommodations of a CART real time transcription and closed-captioned service the court willfully and deliberately disallowed the use of the reasonable accommodation of my choice for courtroom meaningful access and participation. The Defendant "State" Entity Office of Court Administration has intentionally discriminated against me in violation of title two of the ADA Act, 42 U.S.C § 12101 et seq, Section 504 of the Rehabilitation act of 1973 and New York Human Rights Laws. The state exhibited deliberate indifference to my serious medical needs of CART Real time transcription. Since there are many pending state family court and appeals cases, and the State court has

repeatedly denied me CART use and note takers of my choice and the transcripts ordered have had considerable inaudible words, there is greater injustice to plaintiff if the requested injunction is denied than harm to the defendants if granted and granting the requested relief will not disserve the public interest. Other states including Colorado, Maryland, Washington state and Florida already provide CART in their courtrooms to the qualified disabled with cognitive disabilities including traumatic brain injury. The “State” entity court has already jailed me for requesting disability accommodations (see 6/27/17 transcript in the original petition courts, in official record.) A prompt hearing on this motion is requested so as to put an end to the defendant’s unconstitutional and unlawful conduct so the Plaintiff can obtain all the required needed reasonable accommodations of CART for my qualified ADA disabilities.

New York State and its Office of Court Administration is a public “State” entity subject to title two of the ADA, Section 504 of the Rehabilitation act of 1973.

New York State and its Office of Court Administration have denied providing me with the CART system use in violation of 28 CFR 35.160 where a state entity must pay for and provide reasonable accommodations

including auxiliary aides of real time transcription in State Entity Court proceedings to provide meaningful communications with the court.

There are no stenographers in New York State Family courtrooms. So CART system real time transcription use services for the Cognitively and hearing disabled are sorely needed as reasonable accommodations. It can take up to six months to order a transcript from digital New York "State" family court recordings. Transcripts are expensive and need extensive editing. The delay to order and receive a transcript severely effects meaningful access to understand what is going on in court. And often over 25% of the transcripts words are in audible or impossible for the transcriber to interpret. Indeed the new Rochelle courthouse, the office of court administration has stated that in their 2010 report that the court does not meet minimum audible requirements (see attached exhibit.) So inaudible transcripts do not provide the accommodation, as they are delayed and inaudible. This is particularly true with those like me with cognitive memory impairments.

Whether the "reasonable accommodations" were willful or not is not determinative if the state court entity discriminated. It constitutes disability discrimination if the state entity just denied the reasonable accommodations(once qualified disability is established, Loretta Lynch in



her 2010 ADAAA interpretation stated anyone regarded as having a traumatic brain injury is qualified ADA disabled.). By denying the note taker in the January 25, 2017 state order(after acknowledging I am disabled see exhibits "M", the state court discriminated against me in violation of title two of the ada. By refusing to pay for my note taker services in court, while paying for my ex-wife's note taker (through funding of ex-wife's attorney publicly funded Legal Services of the Hudson Valley, Inc.)

Have attempted to reach out to both Barbara Zahler Gringer Esq., chief legal counsel of the State entity "OCA and Dan Weisz professional service director of OCA and Nancy Barry, 9<sup>th</sup> district executive of OCA., at but none have returned my calls in the last month. In fact, Barbara Zahler Gringer, called my ADA advocate, Donna Drumm, Esq. and stated she could not speak with me while this action is pending. The state entity has a fiduciary, ethical, morale, professional and civic duty to communicate with the qualified disabled litigants about administrative ada accommodations such as CART, and other reasonable accommodations. This is regardless if there is a federal lawsuit or not to protect/enforce civil rights.

By requiring permission to file ADA grievance/appeal with the appellate division on article 6/8 cases, New York State is violating 28 CFR 35.107 law. This federal law requires "prompt and fair" resolution of ada

grievances/complaints. Filed my grievance/complaint last February and March 2017, but was denied by the appellate division to hear my appeal, because the ada denial of accommodations was not a "final order." This denial is discriminatory of the "State Entity." New York State Office of Court administration must have the same grievance procedure for article 6/8 case as those available in other New York courts. In New York State taxi court, parking court, housing court and civil court, ada appeals/grievances can be appealed as of right. That is not the case in my article 6/8 family court case. In article 6/8 cases, a disabled litigant needs to wait months and file a motion asking permission to file appeal ada denials/grievances before a case ends. The law requiring "permission" violates a fundamental provision of ada: that grievances be processed expeditiously. If a state does not think it has to give you the administrative accommodations, why would a state grant permission to appeal it before the case ends? As such, The New York "State" has disparate, discriminatory and separate grievance procedures for ADA orders from judges in Family court and administrators in court operations as compared to courts of other legal matters. Such practice is illegal and violates federal ada and section 504 of the 1973 rehabilitation act. No other State has such a ridiculous or lengthy ada appeals process as New York in article 6/8 cases.

As the order and grievance practice is illegal and New York State has acknowledged it is illegal “see barrier to accommodations in the court in court records by MFY services this court must grant declaratory judgment that the New York state office of court administrative grievance procedure is illegal and in violation of the ADA.

This declaration is imperative not just for me as qualified disabled litigant in family court, but for hundreds of other denied reasonable accommodations in other New York family courts. Federal Law in 28 CFR 35.107 is clear. The ada grievance procedure must be “prompt and fair”.” Waiting three years for an appellate decision from the Second Dept Appellate Division is not “prompt” It is unfair to have to lengthy judicial appeal for an administrative accommodation at all in Appellate court. These should only be handled and administrated by ada administrators like in most other states.

We cannot wait for the NY State Committee on access to the courts for the disabled to submit its recommendations in late 2018 or 2019 to have grievances processed now in state courts. The Federal court needs to act now and declare the grievance procedure in New York State court is discriminatory and violates ADA( 28 CFR 35.107) and the section 504 of the rehabilitation act of 1973. This so a new grievance procedure can be put

in place immediately to insure the disabled like me have “prompt” resolution of New York state ada grievances denied by a judge in this “State” entity (per 28 CFR 35.107.)

Pursuant to rule 10c, Federal Rules of civil procedure, Plaintiff incorporates the Verified Complaint and Amended Federal Complaints factual allegations in this motion.

A Preliminary Injunction should issue if the Plaintiff successfully demonstrates that (1) there is substantial likelihood of success on the merits; (2) the Plaintiff will suffer irreparable injury if the injunction is not issued; (3) the threatened harm to the Plaintiff outweighs any potential harm to the opposing party; and (4) the injunction, if issued, would not be adverse to the public interest. *Bellsouth Telecoms., Inc v. MCI Metro Access Transmission Servs., LLC*, 425 F.3d 964,968(11<sup>th</sup> Cir. 2005); *Haitian Refugee Center, Inc. v. Nelson*, 872 F. 2d 1555, 1561-62 (11<sup>th</sup> Cir. 1989), *aff’d* 498 U.S. 479 (1991); *Palmer v. Braun*, 287 F.3d 1325, 1329 (11<sup>th</sup> Cir. 2002).

This standard is not rigidly applied by assigning a fixed quantitative value to each of the four factors. Rather, a flexible scale – which balances each consideration and arrives at the most equitable result, given the

particular circumstances of each case – is used. *Texas v Seatrain International, S.A.*, 518 F. 2d 175, 180 (5<sup>th</sup> Cir. 1975). And of all the factors, the principal and overriding prerequisite is irreparable harm resulting from the absence of an adequate legal remedy.” *Sampson v. Murray*, 415 U.S. 61, 88-92 & n. 68 (1974). “it is threat of harm that cannot be undone which authorizes exercise of this equitable power to enjoin before the merits are fully determined.” *Parks v. Dunlop*, 517 f 2d 785, 787 (5<sup>th</sup> Cir. 1975). I, Plaintiff easily meets each of these four requirements. The State Family Court Judges threatened to hold me in contempt of court(see exhibit “G in original injunctive request” if I file additional ADA accommodation requests. Such threats are retaliatory and discriminatory and violate ADA. Such “State” entity threats constitute “irreparable harm” as I am about to have additional never surgery and have three implants that require regular maintenance and doctors visits. As a disabled litigant, I need to be able to file additional requests for reasonable accommodations—especially in a never ending 4 year old case. Needs to be additional accommodations to add flexibility to changing medical needs of two disabled sons and myself.

Money damages alone, simply will not make the plaintiff whole. Only injunctive relief can provide a meaningful remedy to plaintiff.

A. I, Plaintiff Marc Fishman have a substantial likelihood of success on the merits of these claims for violations of the ADA and Rehabilitation Act.

B. Defendants “State” OCA have violated and continue to violate the American with Disabilities Act (“ADA”) now with CART technology use denial.

C. Title two of the ADA requires the Attorney general to promulgate regulations that implement its prohibitions against discrimination. 42 USC § 12134(a). These regulations provide that: A Public entity shall furnish appropriate auxiliary aides (such as use of CART system and large print court orders) where necessary to afford an individual with a disability an equal opportunity to participate in, and enjoy the benefits of, a service, program, or activity conducted by a public entity” 28 CFR § 35.160(b) (1). Moreover the regulations states that “in determining what type of auxiliary aid and service is necessary, a public entity shall give primary consideration to the requests of the individual with disabilities.” *Garcia v. Taylor*, 2009 WL 2496521, \*10 (N.D. Fla. 2009) (citing 28 CFR § 35.160(b)(2)). Failure to make reasonable accommodations to the courtroom and court services for the

qualified ada disabled constitutes discrimination by the public entity(see Tennessee v. Lane, 541 U.S. 509,531-32(2004.)

D. Thus in order to prove my ADA claim and prevail on the merits, I, Plaintiff must establish that (1) I am an individual with a disability; (2) that I was either excluded from participation in or denied the benefits of a public entity's services, programs, or activities; and (3) that the exclusion, denial of benefits or discrimination was by reason of the Plaintiff's disability (see Bircoll, 480 F.3d at 1083; Sholtz v. Cates, 256 F. 3d 1077, 1079 (11<sup>th</sup> Cir 2001) citing 42 U.S.C §12132). In a failure to accommodate case in a state entity public accommodation context, higher courts have held that denial of reasonable accommodations that would enable the disabled to more fully participate in the services, program and activities of the public entity like a prison also constitute prima fascia disability discrimination (see Scott v. district of Columbia, 2006 WL 1409770, \*3 (D.D.C. 2006) Defendants have been aware of my disability for years and failed to accommodate me, while giving opposing counsel permission for the accommodation requested of qualified note takers, for them in the courtroom. Family Court has continued to issue half centimeter size court orders and hand

written orders instead of large 12 point bold style double spaced court orders. Such large print court orders do not add significant cost to court or court programs. Court has the CART system, note takers, stenographers and interprets for communications in the court system already.

E. Whether an accommodation is “reasonable” requires a balancing of all the relevant facts including the size, facilities and resources of the defendant, the nature of and cost of an accommodation, the extent to which the accommodation is effective in overcoming the effects of the disability and whether the accommodation would require a fundamental alteration in the nature of the defendants program.” McCoy, 2006 WL 2331055 at \*9(citing 45 CFR §84.12© (1-3)); School Bd. Of Nassau County v. Arline, 480, U.S. 273, 288 n. 17 (1987); Nathanson v. Medical College of Pennsylvania, 926 F 2d 1368, 1386(3d Cir. 1991). In addition regulation 35.160 requires the public entity to honor the disabled individuals choice of auxiliary aid unless it can demonstrate another means of (CART) technology use that the Plaintiff does not have to pay for. Since the courts through state funding already are



mandated to use CART for the hearing and cognitively disabled, the court can provide the same accommodation to me.

F. Defendants have violated and continue to violate Section 504 of the Rehabilitation Act. Like the ADA, the rehabilitation Act prohibits discrimination on the basis of disability in federally conducted programs and in all of the operations of public entities that receive federal financial assistance. Specifically, the Rehabilitation Act provides , in relevant part, that: No otherwise qualified individual with a disability in the united States, as defined “ No otherwise qualified individual with a disability in the United states, As defined in section 705(20) of this title, shall solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.” 28 USC § 794(a.) Discrimination claims under the rehabilitation Act are governed by the same standards used in ADA cases and two statutes are generally construed to impose the same requirements. See *Allmond v. Akal Sec., Inc.*, 558 F.3d 1312 (11<sup>th</sup> Cir. 2009); *Cash v. Smith*, 231 F. 3d 1301 (11<sup>th</sup> Cir 2000). As New York “State” Entity receives federal funds, there is substantial likelihood exists that I

will I prevail on the merits of this rehabilitation Act claim. Exh. 2 Upchurch Dep. 12:1-15; see also Harris v. Thigpen, 941 F.2d at 1522; Schroeder v. City of Chicago et al., 927 F.2d 957(7<sup>th</sup> Cir. 1991) (clarifying that the Rehabilitation Act, as amended in 1988, applies to the “entirety of any state or local institution that (has) a program or activity funded by the federal government.”); see Bonner. Ariz. Dep’t of Corr., 714 F. Supp. 420, 422 (D. Ariz. 1989) holding the Rehabilitation Act plaintiff is entitled to appropriate auxiliary aids in all operations of the Department of Corrections, regardless of which specific program receives federal funds) (emphasis added).

G. I, Plaintiff Will Continue to Suffer Irreparable Injury in the absence of a preliminary injunction. Having demonstrated a substantial likelihood of success on the merits, I, plaintiff must next demonstrate that I will suffer irreparable injury if the requested injunction is not issued. Haitian refugee center, Inc., 872 F.2d at 1561-2. “irreparable injury” is distinguishable from mere injury, in that irreparable injury cannot be compensated through the award of money. In the office of court administration denial of CART use the state entity family court has denied me permission to bring

digital recording technology into the courtroom to record the proceedings. Even if I wanted to hire a cart transcriber, the court has denied access to the courtroom for all recording equipment and technology. The state court is discriminating as it alone directs what recording equipment if any can be brought into a court. This violation of ADA auxiliary aids violates ADA (See United States versus Jefferson County, 720 F 2d 1511, 1520 (11<sup>th</sup> Cir 1983); Ray v. School District of Desoto County, 666 F. supp. 1524, 1535(M.D. FLA 1987).

H. In the context of the ADA and Rehabilitation act, courts have consistently held that “discrimination on the basis of disability is the type of harm that warrants injunctive relief.” Doe v. Judicial Nominating Commission for the Fifteenth Judicial Circuit of Florida, 906 F. supp. 1534, 1545 (S.D. Fla. 1995); Spiegel v. City of Houston, 636 f. 2d 997 (5<sup>th</sup> Cir. 1981). Irreparable harm has been suffered and injunctive relief is appropriate “when a disabled person loses the chance to engage in normal activity.” D’Amico v. NY State Board of Law Examiners, 813 f. supp. 217, 220 (W.D.N.Y. 1993); Ray , 666 F. supp. At 1535 (“Denial of the

opportunity to lead as normal an education and social life as possible” constitutes irreparable injury).

- I. As the “State” already jailed me last summer for a three week sentence for what it determined was failure to follow handwritten, script court orders and court orders of protection in half centimeter size print, the threat of not having CART technology and real time transcribers to understand what the state judge expects and is not clearly stated in the order is real. Judge Schauer jailed me for sending gifts to my kids on Passover, July 4<sup>th</sup>, Memorial Day and Easter 2016. The court order stated I could send gifts on major holidays. The order of protection provided for the same approval and instructions. However the state court said on the record court that in their judicial court opinion there were no gift giving holidays between March and July 2016. I forgot what the judge said and just followed the order. Had I had a cart transcription real time transcript and closed captioned access to the words spoken in real time, I would have been able to review the notes and see that the judge said there were no gift giving holidays. Instead I was jailed, injured in jail and suffered irreparable harm. Since Family court orders from Judge Schauer, Judge Oliver and

Magistrate Jordan are complicated, it is imperative that they be prepared in large print from a CART Transcriber. If not, will probably fail to comply with a court order again. An injunction is required because the family court state entity will not grant the accommodations on its own.

J. The continued and irreparable harm suffered by plaintiff far outweighs any potential harm, which the injunction may cause. The irreparable harm suffered by the plaintiff as discussed above is clear. Without the reasonable accommodations requested herein, plaintiff will most likely violate complicated small print and handwritten court orders without a CART Transcriber/operator taking down all points. Defendant's "State" on the other hand can point to no legally recognizable harm whatsoever to themselves or others if they are required to take the steps necessary to provide me with the equal opportunity to participate in court programs, appearances, services and activities that the law requires in ordering CART use. Governor Cuomo has ordered the state to provide the accommodation and have the accommodation in each courtroom. Pursuant to ADA and Rehabilitation a "State", a public entity can only avoid providing a disabled individual with the individual's

requested choice of auxiliary aid if “it can demonstrate the action would result in a fundamental alteration in the nature of a device, program or activity or create an undue financial burden.” 28 CFR § 35.164. In such circumstances, the public entity has the burden of demonstrating that providing the requested auxiliary aid for the disabled individual would create such a hardship. The “state” entity has failed to show it cannot provide CART or large print real time transcription. New York “State” has lots of staff, interpreters, scribes, transcribers and resources to provide these reasonable accommodations. Defendants State Office of court administration cannot meet their burden here. Accommodating my disability will not result in any sort of fundamental administrative, financial, or security-related burden, and thus it is clear that irreparable harm that plaintiff continues to suffer outweighs any potential harm which the injunction may cause. See also *doe* , 906 F. Supp. At 1545.(the third prong of the test for preliminary injunction is also met because no damages ensues to the JNC in abiding by the ADA.” Ray 66 F. Supp at 1535(Actual ongoing injury to Plaintiffs..clearly outweighs the potential harm to others”)

Concerned Parents, 846 f. Supp. At 993( The expenditure of funds cannot be considered a harm if the law requires it.”)

K. The public interest clearly supports injunctive relief. The broad public interest in providing protection against these vital anti-discrimination laws decidedly tips the balance of equities in favor of the entry of a preliminary injunction. There simply can be no question of any harm to the public by ensuring that Defendants comply with the ADA and the Rehabilitation Act and its prohibitions against discrimination against individuals with disabilities. See Costello v. Wainwright, 397 F. Supp. 20, 38 (M.D, Fla 1975) Footnotes omitted. The fourth prong is met because the public interest requires that discrimination against disabled not be tolerated.” See Tugg, 864 F. Supp. At 1211 (“The Public has an interest in providing for full participation by persons with disabilities in the benefits afforded by the state.”; Concerned Parents, 846 F. Supp at 993 (“ The equality of all persons is the underlying principle of the ADA, and one which the public has a strong interest in promoting.”

L. Plaintiff should not be required to Post Bond. This court has the discretion to issue a preliminary injunction without requiring the

Plaintiff to Post Bond. See people of state of California ex rel. van De Kamp v. Tahoe Regional Planning agency, 766 F. 2d 1319 modified on the grounds, 775 F 2d 998 (9<sup>th</sup> Circuit 1985); Roth v. Bank of the Commonwealth, 583 F. 2d 527, 539 (6<sup>th</sup> circuit 1978). Exercise of discretion where issues of public concern or important federal rights are involved. See Cont'l Pil co. v. frontier Ref Co., 338 F. 2d 780, 782(10<sup>th</sup> circuit. 1964).

M. As far as the declaratory judgment that NY State violates the grievance procedures in 28 CFR 35.107, the chief clerk in the appellate division clearly is not administering an ada grievance timely. The ADA Appeal was filed in March 2017 and denied 4/4/18 see previous exhibit "N" in first injunctive relief request for failure to obtain permission to appeal or ask for grievance. Ny State grievances for ada administrative matters violates federal law It is clear NY State is in clear violation of 28 cfr 35.107 for not having any timely resolution of ada grievance appeals.

Wherefore plaintiff for the foregoing reasons, respectfully request that this court:

1. Promptly Schedule a hearing on Plaintiff's motion for Preliminary Injunctive Relief;



2. Issue a Preliminary Injunction requiring Defendants to provide plaintiff with the necessary ADA reasonable accommodation of Large Print CART REAL Time Transcription services
3. Issue Declaratory Judgment that the State Court Discriminated against Marc Fishman for his disabilities for denying CART use for his qualified ADA disabilities
4. Issue Declaratory Judgment declaring Ny State Office of Court administration and Ny State Entities are in default of 28 CFR 35.107 and directing the OCA State agency to submit a proposed grievance procedure to get into federal ada compliance with timely grievances of State Family Court matters within 30 days of this injunctive order.
5. Waive the posting of a bond for security; and
6. grant such other relief as the Court may deem just and equitable.

Respectfully Submitted,

Marc Fishman

Pro Se, Qualified ADA Disabled litigant

A handwritten signature in black ink, appearing to be 'M. Fishman', written over a horizontal line.

By: Marc Fishman August 31, 2108



**NYS UNIFIED COURT SYSTEM  
DENIAL OF ACCOMMODATION FORM**

**Person for whom accommodation is sought:** Marc Fishman

**Address:** 3200 Netherland Ave., Apt. G, Bronx, NY 10463

**Email:** rentdriver@gmail.com

**Phone Number:** 914-837-3209

**Date of initial request:** June 7, 2018, June 11, 2018

**Person's Status:**

☐ Juror ☒ Party ☐ Witness ☐ Attorney ☐ Other (specify: \_\_\_\_\_)

**Court or court facility:** Westchester Family Court

**Judge (if applicable):** Support Magistrate Carol A. Jordan

**Case name and number (if applicable):** Solomon v. Fishman (131794)

**Type of disability:** post-concussion syndrome"; tinnitus; occipatal neuralgia/TJM headaches.

**Accommodation(s) requested:** See attached  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Reason(s) for Denial:** *(Check all that apply and provide specific explanation)*

- ☒ Person is not disabled. *Explain:*
- ☐ Person is disabled, but the court is not required to provide an accommodation. *Explain:*
- ☐ Requested accommodation(s) would create undue financial or administrative burden.  
*Explain:*
- ☐ Requested accommodation(s) would fundamentally alter the nature of service,  
program, or activity. *Explain:*
- ☒ An alternative accommodation that would allow full participation in the proceeding  
is available. *Explain:*





STATE OF NEW YORK  
UNIFIED COURT SYSTEM  
OFFICE OF THE ADMINISTRATIVE JUDGE  
NINTH JUDICIAL DISTRICT

RICHARD J. DARONCO WESTCHESTER COUNTY COURTHOUSE  
111 DR. MARTIN LUTHER KING JR. BOULEVARD  
WHITE PLAINS, NEW YORK 10601  
TEL: (914) 824-5100 FAX: (914) 995-4111

HON. LAWRENCE K. MARKS  
Chief Administrative Judge

HON. MICHAEL COCCOMA  
Deputy Chief Administrative Judge  
(Outside NYC)

HON. KATHIE E. DAVIDSON  
District Administrative Judge  
Ninth Judicial District

NANCY J. BARRY, ESQ.  
District Executive

June 22, 2018

Mr. Marc Fishman  
3200 Netherland Ave., Apt. G  
Bronx, NY 10463

Re: ADA Accommodation

Dear Mr. Fishman:

Attached please find the NYS Unified Court System Denial of Accommodation Form that I have completed, reviewed and signed. Your request for the provision of realtime reporting services is denied, based on the information provided.

You stated that your disabilities are : "post-concussion syndrome"; tinnitus; occipital neuralgia/TJM headaches. Additionally, you stated that these conditions: make it "difficult/near impossible for me to remember the spoken word," "effect[] immediate recall and short term memory greatly," and cause you "to not remember fully."

You have asked for realtime reporting as an ADA accommodation for what you describe as your cognitive disabilities, so that you can be reminded of oral instructions given by the court.

Please be advised that realtime reporting, the simultaneous textual transcription of spoken words on a screen, is used as an accommodation for those with hearing impairments. Although you mention tinnitus, a condition which may in some people cause hearing loss, you have not provided any medical documentation that it has done so in your case. Nor does it appear that you were unable to hear the proceedings in any of your numerous prior court appearances. If you are able to provide medical documentation that you are hearing-impaired and that your ability to participate in court proceedings is thereby impacted, please submit it. We will then consider whether any assistive technologies might provide an accommodation for your hearing impairment, including assistive listening devices or realtime reporting, or whether any alterations in

courtroom practice or procedure that your physician might recommend could provide a suitable accommodation.

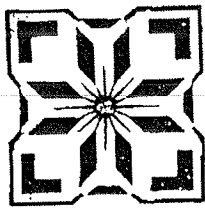
Realtime reporting cannot be provided to address your asserted short-term memory impairment. Transcripts of the official record can be obtained through the usual process upon request, and will provide a complete written record of the proceedings. To the extent that you assert you must obtain an immediate transcript so that you will be able to remember an instruction given you by the court, you may also request from the judge, when given such an instruction, the opportunity to pause the proceedings while you write down what was instructed. Alternatively, you may also for the same purpose make use of your attorney, or of the ADA advocate the trial court has permitted to accompany you during the proceedings, or of a neutral, non-witness notetaker the court has granted you permission to use during proceedings. In any event, the incident you cite regarding your failure to obey the court's written order – that gifts could only be sent to your children "on birthdays and major holidays" – appears to have been caused by your misinterpretation of the language of that written order (i.e. your apparent belief that Passover, Memorial Day and July Fourth could be construed as appropriate gift-giving holidays), not by any failure of memory.

Attached to the NYS Unified Court System Denial of Accommodation Form are the instructions for the administrative review of this matter.

Respectfully,

A handwritten signature in black ink, appearing to read "NJB", is written over the typed name.

Nancy J. Barry  
District Executive



# DISABILITY RIGHTS NEW YORK

New York's Protection & Advocacy System and Client Assistance Program

*Via Email*

June 7, 2018

Honorable Michelle I. Schauer  
Judge of the Westchester County Family Court  
c/o Court Attorney Michelle D'Ambrosio  
c/o Nicole Marciano  
131 Warburton Avenue, 3rd Floor  
Yonkers, New York 10701  
[mdambros@nycourts.gov](mailto:mdambros@nycourts.gov)  
[nmarcano@nycourts.gov](mailto:nmarcano@nycourts.gov)

**RE: Jennifer Solomon v. Marc Fishman, Docket Nos. V-081887/8/9-14/15B**

Dear Judge Schauer:

Disability Rights New York ("DRNY") is the Protection and Advocacy agency for New York State. Protection and Advocacy agencies are authorized by federal law to provide legal representation and other advocacy services to people with disabilities. We provide information and referrals, as well as training and technical assistance to service providers, state legislators and other policymakers.

DRNY was contacted by Marc Fishman in January 2018 regarding the lack of free transcription services available to him in the aforementioned proceedings. Your Honor informed Mr. Fishman repeatedly that the transcription services he was requesting were not available in the Westchester County Family Court courthouse located in Yonkers, NY.

However, according to multiple news sources and the New York State Unified Court System 2017 Annual Report, Yonkers Family Court has had advanced audiovisual technology in its courtrooms, including instant voice-to-text translations, since 2016. See New York State Unified Court System 2017 Annual Report, [http://www.nycourts.gov/reports/annual/pdfs/2017\\_UCS-](http://www.nycourts.gov/reports/annual/pdfs/2017_UCS-)

725 Broadway, Suite 450  
Albany, New York 12207  
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44 Exchange Blvd, Suite 110  
Rochester, New York 14614  
(585) 348-9823 (fax)

[mail@DRNY.org](mailto:mail@DRNY.org) • [www.DRNY.org](http://www.DRNY.org)

(800) 993-8982 (toll free) • (518) 432-7861 (voice) • (518) 512-3448 (TTY)

Page 2 of 2

Annual Report.pdf 5 (2017) ; *see also* State of New York Unified Court System, "Press Release: High-Tech Courtroom Opens in Westchester County Supreme Court," [http://www.courts.state.ny.us/PRESS/PDFs/PR17\\_19.pdf](http://www.courts.state.ny.us/PRESS/PDFs/PR17_19.pdf) (Dec. 13, 2017); National Center for State Courts, "New York State Courts Announce High Tech Courtrooms," Court Technology Bulletin, <https://courttechbulletin.blogspot.com/2017/12/new-york-state-courts-announce-high.html> (Dec. 20, 2017).

The Yonkers courtrooms have instant voice-to-text services and Family Court could either electronic or paper copies of transcripts generated by those services at minimal if any cost. The provision of free transcripts therefore constitutes a reasonable modification of the kind required by the ADA to avoid disability discrimination. *See* 42 U.S.C. §§ 12131(1), 12132; 28 C.F.R. § 35.130(b)(7).

Disability Rights New York therefore respectfully requests that Your Honor implement usage of the voice-to-text translation technology for all Mr. Fishman's future appearances, and provide Mr. Fishman with electronic or paper transcripts generated by those services free of cost.

Please feel free to contact me if you have any additional questions or concerns. You can reach me at (518) 512-4952 or at [sara.liss@drny.org](mailto:sara.liss@drny.org).

Thank you for your consideration.

Very truly yours,

/s/ Sara Liss

Sara Liss, Esq.  
Phone: (518) 512-4952  
Email: [sara.liss@drny.org](mailto:sara.liss@drny.org)

CC: Nicole Feit, Esq., Attorney for Plaintiff: [nfeit@lshv.org](mailto:nfeit@lshv.org)  
Ian Spier, Esq., Attorney for Defendant: [legaleasel@gmail.com](mailto:legaleasel@gmail.com)



**Marc Fishman**  
**3200 Netherland Avenue**  
**Apartment G**  
**Bronx, NY 10463**  
**(914) 837 - 3209**  
**Facsimile (347) 843 - 6894**

Via Facsimile and Hand Delivery

June 11, 2018

Honorable Carol Ann Jordan  
Support Magistrate  
420 North Ave  
New Rochelle, NY 10801

Re: Solomon vs. Fishman ADA Accommodation Requests for use of CART  
"Computer Aided Real Time Transcription/Captioning System"  
File No. 131794

Dear Magistrate Jordan:

Am writing to follow-up on my letter to the court Liaison William Curry and his boss James McCalister requesting use of a Family courtroom with the CART system. Have left 5 telephone messages to Mr. Curry and Mr. McCalister in the last two weeks, but none of my calls have been returned or letters responded to.

On the NY Courts.Gov Website (attached) it lists that CART services with "Computer -aided transcription services" are available as an ADA accommodation from Office of Court administration. The service has the capability of printing out a transcript. With my Occipital Neuralgia TBI, Tinnitus and other qualified disabilities CART technology is needed to visually see the words spoken to assist with my TBI speech /organization disability and read the same day transcript.

My advocates at Disability Rights NY (DRNY) wrote to the court last week requesting that the family court provide this technology to me as a qualified ADA disabled person. The Family Court publicizes this technology on its website as being available in the Westchester Court System including Yonkers and White Plains.

My Disability advocate noted in the letter to the State court, that the State court is required to make this technology available in the attached letter when it is installed in the Family Court System Court Rooms.

It should be noted that Westchester County Family Court is all one court with several branches. The CART transcription Service can significantly assist me to

have meaningful access and provide the same day printouts of transcripts to aid my cognitive memory difficulties and comprehension.

Until the CART Transcription Service or Auxiliary Aid of note taker is provided, all court appearances should be rescheduled.

My advocate and I have verified that the CART system has been used in other NY state courtrooms with the hearing and cognitively impaired. To deny me access in an administrative capacity to this auxiliary aid listed under NYcourts.gov that, "Type of accommodations the court can make" would be discriminatory, violation of my civil rights and ADA.

Please provide the CART System and Cart transcripts to me as a qualified ADA disabled individual participating in NY Courts.

Thank you.

Very Truly Yours,



Marc Fishman  
Qualified Disabled Litigant in NY Courts

Enclosures

C: Eve Bunting Smith Esq.  
Donna Drumm, Esq.  
Ian Spier, Esq.  
Federal Judge Karas  
Sara Liss, DRNY  
Honorable Kathie Davidson, Esq.  
Hon. Judge Egitto, Family Court Admin  
Dan Welsz, OCA  
Commission on Access to the courts for the Disabled  
Inspector General  
James McCalister, Court Clerk  
William Curry, Court ADA Liaison



## PRESS RELEASE

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**New York State  
Unified Court System**

**Hon. Lawrence K. Marks  
Chief Administrative Judge**

**Contact:**  
**Lucian Chalfen, Public Information Director**  
**Arlene Hackel, Deputy Director**  
**(212) 428-2500**

[www.nycourts.gov/press](http://www.nycourts.gov/press)

**Date: September 26, 2017**

### **New Committee Aims to Promote Court Access for People with Disabilities**

**New York** – As part of the State court system's initiative to achieve and maintain excellence throughout the judicial branch, Chief Judge Janet DiFiore and Chief Administrative Judge Lawrence K. Marks today announced the formation of an advisory panel charged with developing an action plan to improve access to the New York State courts for all persons, including those with visual, hearing, communication, mobility, cognitive and other disabilities.

The courts' Advisory Committee on Access for People with Disabilities comprises Unified Court System judges, clerks and administrators, as well as representatives from legal services providers, law firms and advocacy groups from around the State. The Committee will be led by Hon. Rosalyn H. Richter, Associate Justice of the Appellate Division, First Department.

The advisory panel will examine a broad scope of issues, including the procedures for requesting accommodations; the availability of sign language interpreters, as well as the quality of remote video interpreting services for the deaf and hard of hearing; the navigability for those with visual and other disabilities of online court programs and services; barriers faced by jurors who have a disability; and training and other needs to ensure best practices in providing access for court users with special needs. The Committee will submit its recommendations to the Chief Judge on these issues, among other topics of concern.

Court users are protected from disability discrimination by the American Disabilities Act (ADA) and other statutes. Each courthouse has a liaison to assist in providing reasonable accommodations to litigants, attorneys and other court users with special needs. The court system employs a statewide coordinator to oversee the facilitation of such requests, offering training, technical and other resources to the liaisons, as well as to judges and other court staff.

The new panel, which counts the courts' statewide coordinator, Dan Weitz, among its members, will explore how the New York State courts can more effectively respond to and manage accommodation requests and related inquiries.

Additionally, Deputy Chief Administrative Judge Edwina G. Mendelson, another member of the advisory group, who heads the courts' newly expanded Office for Justice Initiatives (OJI) – which works to ensure meaningful access to justice for all those who pass through New York's state courthouses – will work closely with the Committee members to seek ways the OJI can enhance accessibility for court users with special needs.

“Access to the courts is a fundamental right, protected by our state and federal constitutions. The advisory panel will work to identify and remove barriers to court facilities and services, wherever possible, ensuring that New York's state courts are readily accessible to all people, regardless of disability or any other factor. I am thankful to the Committee members for their deep understanding of that principle,” said Chief Judge DiFiore.

“Chief Judge DiFiore and I look forward to working with the new advisory group as we strive to eliminate barriers to justice. I commend the Committee's members for their dedication to this critically important effort,” said Chief Administrative Judge Marks.

“I am honored to be chairing the Committee, and thank the Chief Judge and Chief Administrative Judge for their commitment to ensuring full and equal access to our state courts. I know we can make a difference with the assistance of our knowledgeable Committee members,” said Judge Richter.

A roster of the Advisory Committee members is attached.

## **New York Courts' Advisory Committee on Access for People with Disabilities**

### *Chair*

Hon. Rosalyn H. Richter  
Associate Justice, Appellate Division, First Department

### *Members*

Maureen Belluscio  
Staff Attorney, New York Lawyers for the Public Interest, Disability Justice Program

Anne Callagy  
Director of Government Benefits, The Legal Aid Society - Civil Practice

Beth Diebel  
District Executive, Third Judicial District, New York Courts

Hon. Vincent DiNolfo  
County Court Judge, Monroe County

Hon. Sherry Klein Heitler  
Chief of Office of Policy and Planning, NYS Office of Court Administration

Hon. Deborah Kaplan  
Statewide Coordinating Judge for Family Violence Cases, NYS Office of Court Administration

Kleo King  
Deputy Commissioner and General Counsel, NYC Mayor's Office for People with Disabilities

Eve Markewich  
Partner, Markewich and Rosenstock LLP

Hon. Edwina G. Mendelson  
Deputy Chief Administrative Judge, Office for Justice Initiatives, New York Courts

Hon. Juanita Bing Newton  
Dean, New York State Judicial Institute

Charles Perreaud  
Jury Commissioner and Court Interpreting Coordinator, Seventh Judicial District, New York Courts

Hon. Robert Pipia  
District Court Judge, Nassau County

Michael Schwartz  
Supervising Attorney and Director, Disability Rights Clinic, Office of Clinical Legal Education,  
Syracuse University College of Law

Liz Sergi  
Senior Social Worker, Helen Keller Services for the Blind

Charles Small  
Chief Clerk for Civil Matters, Kings County Supreme Court

Nahid Sorooshyari  
Senior Staff Attorney, Mobilization for Justice (formerly MFY Legal Services)

Dan Weitz  
Director, Division of Professional & Court Services, NYS Office of Court Administration

*Counsel to the Committee*  
Barbara Zahler-Gringer, NYS Office of Court Administration

# # #

# EXHIBIT “D”

# EXHIBIT "D"

See June 22, 2010  
Scribed Report

"An Assessment of the Westchester  
County Family Court Facilities

in Yonkers & New Rochelle

6/22/22

Office of Court Facilities Planning

New York State OCA

Page 7

"Acoustics within the facility are poor"



**Courtroom and Hearing Rooms** The Court lacks adequate hearing rooms for Support Magistrates and Judicial Hearing Officers. The hearing rooms for both Magistrates and JHO's measure less than the 300 square foot minimum that is required by the Guidelines for Court Facilities. In addition, the JHO hearing room has only one entry point. Parties, attorneys, prisoner and witnesses must access this room through a congested internal corridor.

The clerk's work stations in the courtroom and in the Magistrate's hearing room lack sufficient space for performing routine paperwork and locating files and equipment. The clerk's desk in the courtroom measures less than seven square feet, making it uncomfortable and impossible to add any equipment to this area. In addition to the lack of space, these courtrooms and hearing rooms lack adequate data and power wiring to accommodate the technology that is needed.

**Chambers and Related Space** The Court's chamber is undersized and lacks adequate wiring and electrical outlets which, in turn, limit flexibility in use and positioning of the judge's staff and equipment.

**Children's Center** The Children's Center suffers from the same issues as Yonkers Children's Center: limited space (for only six children), no private restroom and no easy access to drinking water. As a result, children are often turned away and must wait with their parents in the crowded waiting rooms and hallways of the facility.

**Supply Room/Lunch Area** The Court's lunch area doubles as a storage closet where paper supplies, equipment and furniture occupy much of the space. This area does not have a sink and employees must clean their dishes and utensils in the restrooms.

## Parking

The New Rochelle Court lacks both sufficient and secure parking. The facility's parking lot, which serves the court users as well as other building tenants, has four spaces reserved for judges and court staff. The parking lot is inadequate and undersized for the number of attorneys and litigants appearing in the Court during peak hours. The combined use of the lot by court users and the other building tenants and visitors results in a full and congested lot throughout the day. Court visitors and staff are required to park off-site using municipal parking garages and street parking located blocks away from the court facility.

## Miscellaneous

Acoustics within the facility are poor. Noise travels easily from the waiting rooms and lobby into nearby courtrooms thereby making it difficult to conduct proceedings. In addition, privacy and confidentiality between attorneys and their clients is often compromised due to lack of attorney/client conference rooms.

This facility has a long history of heating and cooling system failures. Water leaks are routine and window seals are failing. There are problems with the integrity of the building's roof as rainwater has penetrated into the courtroom and public access counter areas. This condition has become so bad that a portion of the ceiling in the courtroom has collapsed. In addition, when there is a heavy rain, the public access counter is rendered unusable due to leaking water. This situation has become so serious that the computer at the public counter is covered in plastic to protect it from such leaks.



**A07939 Summary:**

BILL NO A07939A  
 SAME AS SAME AS  
 SPONSOR Weinstein  
 COSPNSR Schimel, Weprin  
 MLTSPNSR  
 Amd S390, Judy L

Expands provisions to enable persons who are deaf or hard of hearing to participate in court proceedings.

**A07939 Actions:**

BILL NO A07939A  
 06/01/2015 referred to judiciary  
 06/08/2015 reported referred to ways and means  
 06/10/2015 amend (t) and recommit to ways and means  
 06/10/2015 print number 7939a  
 06/15/2015 reported referred to rules  
 06/15/2015 reported  
 06/15/2015 rules report cal.484  
 06/15/2015 ordered to third reading rules cal.484  
 06/17/2015 passed assembly  
 06/17/2015 delivered to senate  
 06/17/2015 REFERRED TO RULES  
 06/18/2015 SUBSTITUTED FOR S5533B  
 06/18/2015 PASSED SENATE  
 06/18/2015 RETURNED TO ASSEMBLY  
 09/15/2015 delivered to governor  
 09/25/2015 signed chap.272

*State Law "CART"  
 Requiring in Court Room*

**A07939 Memo:**

NEW YORK STATE ASSEMBLY  
 MEMORANDUM IN SUPPORT OF LEGISLATION  
 submitted in accordance with Assembly Rule III, Sec 1(f)

**BILL NUMBER:** A7939A      **REVISED MEMO** 06/11/2015

**SPONSOR:** Weinstein

**TITLE OF BILL:** An act to amend the judiciary law, in relation to enabling the participation in court proceedings of individuals who are deaf or hard of hearing

**PURPOSE OF BILL:**

This bill will provide real time court reporting services to individuals who are deaf or hard of hearing.

**SUMMARY OF PROVISIONS OF BILL:**

Section 1 - Amends the judiciary law section 390 to provide equal access to court proceedings for deaf or hard of hearing persons by authorizing

the provision of real-time stenographic translation for deaf or hard of hearing persons in court, in addition to the provision of other appropriate auxiliary aids or services.

Section 2 - Effective date.

**JUSTIFICATION:**

While the court currently has the ability to make arrangements for the deaf and hard of hearing there is no detailed mandated to do so and 60% of reporters do not have the capacity to do so. This bill would enable the deaf and hearing impaired to receive real time court reporting services.

**LEGISLATIVE HISTORY:**

New bill, 2015.

FISCAL IMPLICATIONS FOR STATE AND LOCAL GOVERNMENTS:

Nominal.

EFFECTIVE DATE:

This act shall take effect on the thirtieth day after it shall have become a law.

A07939 Text:**STATE OF NEW YORK**

7939--A

2015-2016 Regular Sessions

**IN ASSEMBLY**

June 1, 2015

Introduced by M. of A. WEINSTEIN, SCHIMEL, WEPRIN -- read once and referred to the Committee on Judiciary -- reported and referred to the Committee on Ways and Means -- committee discharged, bill amended, ordered reprinted as amended and recommitted to said committee

AN ACT to amend the judiciary law, in relation to enabling the participation in court proceedings of individuals who are deaf or hard of hearing

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

1 Section 1. Section 390 of the judiciary law, as amended by chapter 478  
2 of the laws of 1992, is amended to read as follows:  
3 § 390. ~~[Appointment of interpreter]~~ Equal access to court proceedings  
4 for deaf or hard of hearing person. 1. Whenever any deaf or hard of  
5 hearing person is a party to a legal proceeding of any nature, or a  
6 witness or juror or prospective juror therein, the court in all  
7 instances shall appoint a qualified interpreter who is certified by a  
8 recognized national or New York state credentialing authority as  
9 approved by the chief administrator of the courts to interpret the  
10 proceeding to, and the testimony of, such deaf or hard of hearing  
11 person; provided, however, where compliance with this section would  
12 cause unreasonable delay in court proceedings, the court shall be  
13 authorized to temporarily appoint an interpreter who is otherwise qual-  
14 ified to interpret the proceedings to, and the testimony of, such deaf or  
15 hard of hearing person until a certified interpreter is available. In  
16 any criminal action in a state-funded court, the court shall also  
17 appoint such an interpreter to interpret the proceedings to a deaf or  
18 hard of hearing person who is the victim of the crime or may appoint  
19 such interpreter for the deaf or hard of hearing members of the immedi-  
20 ate family (parent or spouse) of a victim of the crime when specifically  
21 requested to do so by such victim or family member. The fee for all such  
22 interpreting services shall be a charge upon the state at rates of

EXPLANATION--Matter in *italics* (underscored) is new; matter in brackets  
[ ] is old law to be omitted.

LBD11169-05-5

A. 7939--A

2

1 compensation established by rule of the chief administrator; except that  
2 where such interpreting services are rendered in a justice court, the  
3 fee therefor shall be paid as provided by law in effect on July first,  
4 nineteen hundred ninety-one.  
5 2. (a) Notwithstanding the provisions of subdivision one of this  
6 section, a court may, upon request of a deaf or hard of hearing person  
7 or upon its own motion, and in lieu of appointing an interpreter as  
8 otherwise required in such subdivision one, provide an assistive listen-  
9 ing device, a stenographer who can furnish communication access real-  
10 time translation or any other appropriate auxiliary aid or service.  
11 (b) For purposes of this subdivision, the following terms shall have  
12 the following meanings:  
13 (i) "Stenographer" means any individual who fulfills the requirements  
14 of section two hundred ninety-one of this chapter.  
15 (ii) "Communication access real-time translation (CART)" means the  
16 instantaneous translation of everything that is spoken in the court room  
17 via a real-time feed, which by means of software converts shorthand  
18 transcription into real-time captioning immediately which can be

19 displayed on a computer or monitor.

20 § 2. This act shall take effect immediately.

SW CNYRxPadMV148555 P Pad 19 of 20 10/11/2008 N

4

## OFFICIAL NEW YORK STATE PRESCRIPTION

☒ DONALD BERNSTEIN DDS  
 LIC. 030027 AB5539260

☒ RICHARD A LANGIULLI DMD  
 LIC. 046477 BL6013178

☒ MICHAEL E NEWMAN DDS  
 LIC. 048686 BN6702686

 688 WHITE PLAINS ROAD  
 SUITE #208  
 SCARSDALE, NY 10583  
 (914) 472-1010

*Claw 030688215  
 2x5*

PRACTITIONER DEA NUMBER

--	--	--	--	--	--	--	--	--	--

Patient Name Marc Fishman Date 9/21/15

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Age \_\_\_\_\_ Sex ☒ M ☐ F

Rx

*See attached letter  
 TMJ diagnosis*
Prescriber Signature *[Signature]*
 MAXIMUM DAILY DOSE  
 (Controlled substances only)

THIS PRESCRIPTION WILL BE FILLED GENERICALLY UNLESS PRESCRIBER WRITES 'dow' IN BOX BELOW

REFILLS

☐ None

Refills: \_\_\_\_\_

00GDYX1 78

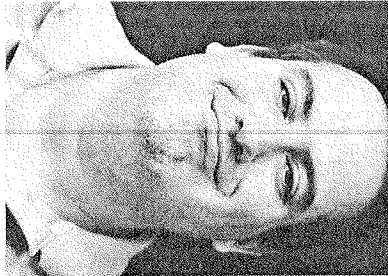


PHARMACIST

TEST AREA

Dispense As Written

XEROGRAPH PROTECTION - PATENTS 6,702,100; 6,810,495



January 8, 2016

Donald Bernstein, D.D.S.  
Scarsdale Dental Associates  
688 Post Road, Suite 208  
Scarsdale, NY 10583

RE: Marc H. Fishman

Dear Dr. Bernstein:

Thank you for referring Marc Fishman. I saw Marc on January 8, 2016. He presents with the following history: He has had an intermittent swelling over the left TM joint region and left parotid gland. He saw his ENT who diagnosed a possible blocked or infected parotid gland. He had seen Dr. Ross at Westmed, an ENT, and Dr. Ramani. They were not sure exactly what was causing the intermittent swelling. You then saw Marc, said it could be a TMJ disorder. He had independently seen Dr. Paul Gittelman for an IME back on May 12, 2014. Dr. Gittelman found crepitus in the left temporomandibular joint and also gave a diagnosis of TMJ dysfunction which was causally related to November 20, 2013. Marc was involved in two motor vehicle accidents. He was hit driving on Central Avenue which has caused occipital neuralgia and cubital tunnel syndrome. The second motor vehicle

accident exacerbated the symptoms, and he had a torn rotator cuff and many other symptoms. Currently Marc is wearing a Medtronic neurostimulator which he got on March 18, 2014, and he is feeling much better. Marc is feeling actually greatly improved. He was able to go off many of your pain medications. He also had a cubital release on March 26, 2014. These surgeries greatly improved his tinnitus and his ear pain. However, the swelling remains over the left parotid and left TM joint. He has been having symptoms of TMJ for at least the last six months, and his hearing has decreased. He also complains of snoring, obstructive sleep apnea, and he was scheduled to have a sleep test, a polysomnogram, next week. He have gained approximately 50 pounds following the motor vehicle accident, and he has high blood pressure. He complains of excessive daytime sleepiness in the late afternoon.

**CLINICAL EVALUATION:** On muscle palpation, we find mild tenderness in the left trapezius, **exquisite tenderness in the left sternocleidomastoid muscle.** The masseter muscles are **exquisitely tender on the right.** The left temporomandibular joint is tender to palpation, particularly the lateral TMJ capsule. **Temporal tendon, medial pterygoid, and lateral pterygoid are all exquisitely tender on the left.** On my examination, I find swelling over the left parotid gland. Interincisal opening is 52 mm. The mandible is off to the left by approximately 1 mm.

Tongue level is a level 3. Occlusion is class 1. Mallampati airway inspection shows a class III airway.

**IMAGING:** There is beaking in the right temporomandibular joint with an anvil-shaped condyle. There is some excess adenoidal tissue still present, and we see hypertrophy at the base of the tongue and the lingual tonsillar region and decreased airway space.

**DIAGNOSTIC IMPRESSION:** There is probable sleep-disordered breathing which will be confirmed by the polysomnogram. I also feel that there is a swelling over

the left parotid. It is not clear whether this is an autoimmune disease or is in some way related to the temporomandibular joint.

**CONTRIBUTING FACTORS:** The trauma from the motor vehicle accidents.

**SEQUENTIAL TREATMENT PLAN:** I have recommended or agreed that the patient should have a polysomnogram based on the results of the polysomnogram. Marc may be eligible for an oral appliance, a 3-D printed oral appliance for sleep apnea. We also discussed the new Medtronic stimulator which monitors his breathing and helps stimulate the genioglossus muscle and maintain an open airway. I have not recommended a daytime appliance at this point. I would like to see Marc again in approximately one month after we have the results of his sleep study.

Donald, thanks for thinking of me.

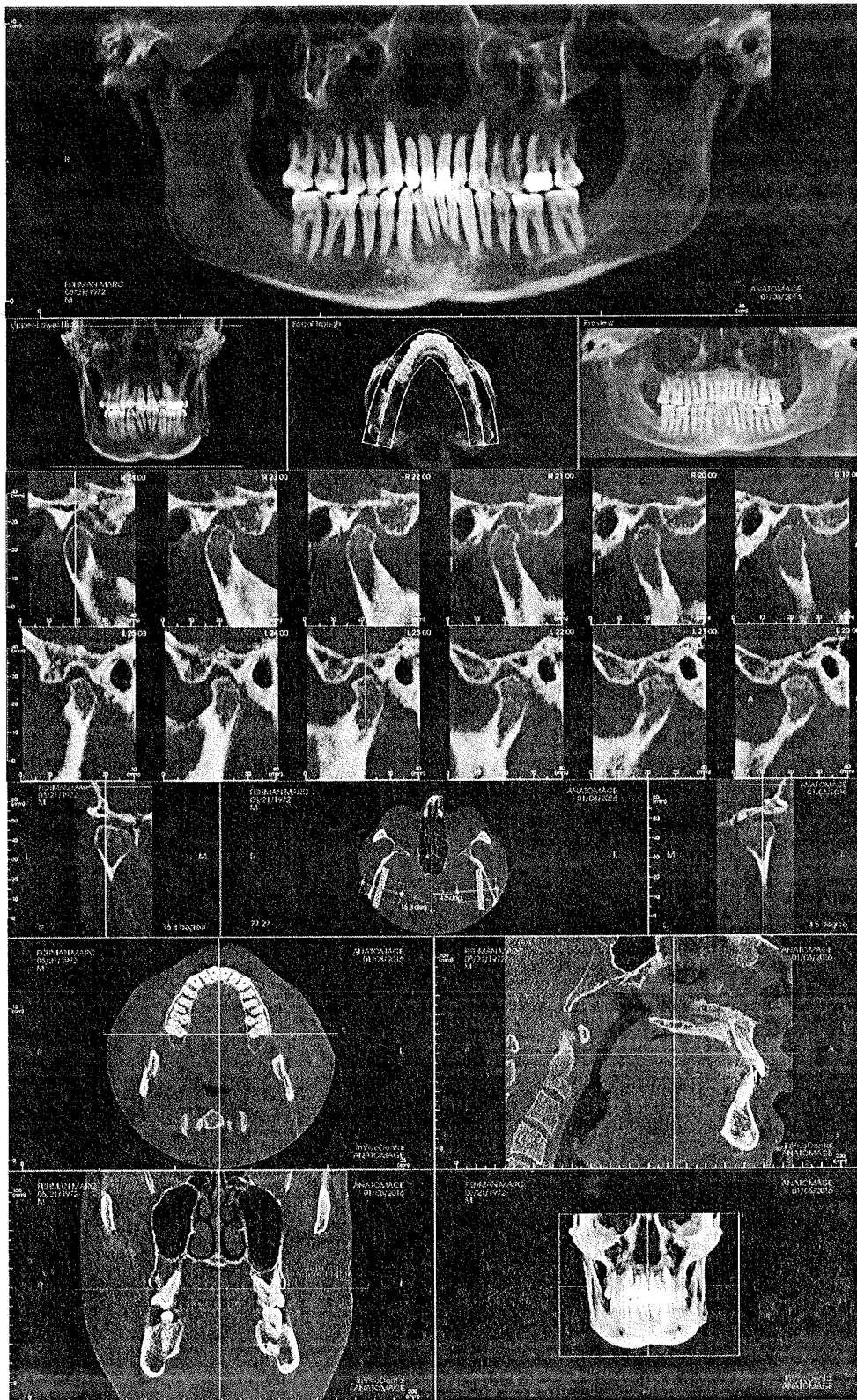
Sincerely,

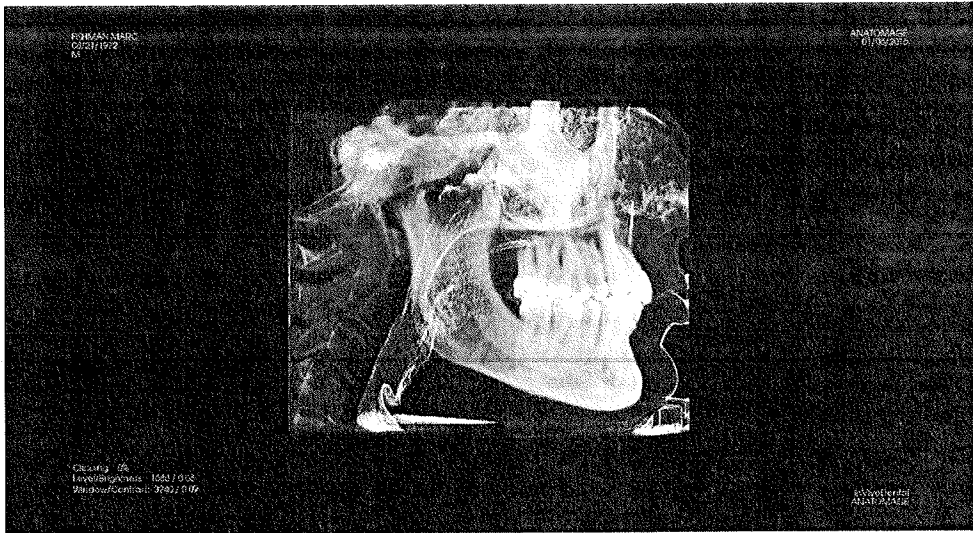
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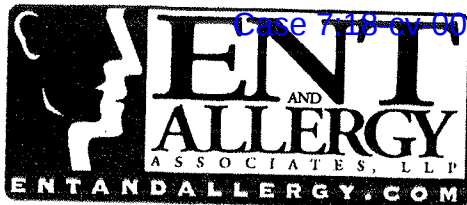
Michael L. Gelb, D.D.S., M.S.

cc: Michael H. Joseph, Esq. 203 E. Post Rd. White Plains, NY 10601









75 South Broadway  
Third Floor  
White Plains, NY 10601  
Office: 914-949-3888  
Fax: 914-949-1271

Wayne B. Eisman, M.D., F.A.C.S.  
Daniel Gold, M.D.  
Cynthia Jerome, M.D., F.A.A.A.I.  
Steven B. Kase, M.D.  
Dan Moskowitz, M.D., F.A.C.S.  
Richard A. Rosenberg, M.D., F.A.C.S.  
Hyman Ryback, M.D., F.R.C.S., F.A.C.S.  
Frank G. Shechtman, M.D., F.A.C.S.  
Richard T. Yung, M.D., F.A.C.S.

**Marc H Fishman**

DOB: 08/21/1972 Age: 41 Years

Gender: M

04/08/2014 10:40 AM

Visit Reason: Office Visit

Patient Type: Established Patient

**Provider Information:**

Rendering: Hyman Ryback MD

PCP: Paul Hersenson

**Insurance Information:**

Allstate

**Vital Signs:** Reviewed by provider.**Complaints:**

Chief Complaint 1: motor vehicle accident

Comments: : motor vehicle accident, November 20 with whiplash

. Patient was seen in the emergency room and white planes hospital with cervical whiplash and facial contusions

. The patient has persistent ear fullness and pressure, especially on the left with vertigo and tinnitus

TMJ and muscle spasm as improved with the stimulator, which was implanted in the occipital nerve with some improvement

continues to have headaches which have improved

**Review of Systems****HEENT:**

Positive for:

ENMT Dizziness, Nasal congestion, Post-nasal drainage, Tinnitus.

**Neuro/Psychiatric:**

Positive for:

Neuro Headache.

**Past, Family, & Social History:****Current Medications: Reviewed**

Medication name	Dose	Start Date	Refills	Sig Codes
TYLENOL-CODEINE NO.3	300 mg-30	03/15/2012	0	

Marc Fishman

DOB: 08/21/1972

April 8, 2014





(<http://intellilex.us/>)

## Choosing between TypeWell and CART Services

When trying to find the right speech-to-text accommodation for real-time communication access, there are two leading contenders: verbatim services like CART (Computer Aided Real-time Translation) and a meaning-for-meaning service like TypeWell. In many situations, like courtroom proceedings or broadcast television, having a strictly verbatim record of what was said is necessary. However, for users who need to quickly digest the speaker's message, reading along is easier when a transcriber is actively translating the speech from spoken English to clear written English, much like an ASL interpreter would.

In addition to transcribing the spoken word, a TypeWell Transcriber also includes relevant non-verbal context cues to the reader. It is not standard practice for CART providers to relay the speaker's intonation, sarcasm, body language, or other non-verbal cues, which can lead to an incomplete and sometimes inaccurate message. TypeWell transcription also removes false starts, stutters, or filler words such as "um" or "like" that can cause a verbatim transcript to appear cluttered and hard to understand in real-time.

Therefore, it is particularly important to know the differences between TypeWell and CART services when selecting the right accommodation. Where CART can be considered a word-for-word iteration, TypeWell provides a meaning-for-meaning translation. We would like to discuss our TypeWell services further to show how they are preferable in an educational setting for students who identify as D/deaf or hard of hearing.



Few people naturally speak as well as they would write. More often than not, speakers meander between topics and present information tangentially instead of linearly. False starts are used when a speaker suddenly decides to discuss a different topic, filler words replace gaps when a speaker thinks of what to say next, and often, sentences are spoken with unclear grammar or syntax. These common occurrences in speech are not particularly troublesome if you're a hearing person and can filter out the junk, but it can make for very unclear text when written verbatim.

## CART

(Verbatim)

“

In addition, let me see where I was, I want to see in your research, technical support.”



## TypeWell

(Meaning-for-meaning)

“

I want to see technical support in your research.”

(<http://intellitext.us/wp->

”

content/uploads/2018/04/TypeWell-versus-CART-12.png)

TypeWell resolves this problem with a meaning-for-meaning translation that communicates the intended information without compromising content. Information isn't lost or left out in meaning-for-meaning transcription; it's interpreted. For this reason, TypeWell is often preferred over verbatim services in the educational setting, as the student is presented with the information in a clear and concise manner for optimal understanding.

### Choose TypeWell for Your Transcription Services

We would love to provide you with a 2-hour free trial to show how TypeWell services have helped thousands of students across the country find success in their educational pursuits. To schedule your demo or to reach out with questions, we welcome you to write us here (<http://intellitext.us/contact.html>).

*Intellitext's TypeWell Services are a federally approved and accepted speech-to-text accommodation for students who are D/deaf or hard of hearing. TypeWell can also be used for Autism Spectrum Disorder (ASD) students, students with learning disabilities, brain injuries, or English as a second language (ESL) speakers. In the IDEA 2004 Revision, Congress specifically named TypeWell as a transcription service that meets the definition of interpreting services and should be considered an effective tool to meet the communication needs of students with disabilities.*

## NEW TO TYPEWELL?

If you're new to TypeWell or real-time transcription services, we would be happy to provide you with a short demo. Click here to schedule a TypeWell demo. (<http://intellitext.us/schedule-demo.html>)

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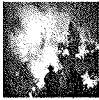
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## **There Is No Substitute for Real-Time Court Reporting**

Nancy Varallo, president of the [National Court Reporters Association](#), owns [The Varallo Group](#), which offers court reporting, business development and administrative support services to reporters and reporting firms.

April 7, 2014

In an era defined by technological advancement, stenographic court reporters remain the gold standard for capturing the spoken word. It's not just that they produce the most accurate legal records, including capturing certain interpersonal nuances that digital recordings might miss. Nor is it simply because they are trained to handle complex procedures associated with trials and depositions. Court reporters are indispensable to the legal system because they offer 21st-century solutions to unyielding situations that demand speed without sacrificing accuracy. They are certainly not relics of a bygone era.

Court reporters can now filter their shorthand through computers to provide judges, attorneys and clients with instantaneous, understandable transcripts.

Today's court reporters are able to filter their shorthand through computers to provide judges, attorneys and clients with instantaneous, understandable transcripts. No other technology can come close. Truth be told, the incident that inspired this discussion probably would have been curtailed had the court been using the real-time method. Traditionally, stenography is expanded into a readable transcript following the day's events. But real-time uses computer software to instantaneously translate shorthand into understandable English. The text then scrolls across the laptop or tablet, much like captioning on a television.

In recent years, court systems have struggled to contain costs. Even in courts that have been forced to implement more affordable methods of record keeping, court reporters

nearly always remain in place for complex civil litigation and felony criminal proceedings, because they are the most reliable in high stakes situations. Likewise, in the deposition setting, outside of the courts, where true market demand is at play, court reporters remain the overwhelming choice for attorneys because they know there is no substitute for what we do.

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## 45 Comments

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Newest

**Steve**

Washington DC [December 20, 2015](#)

It has been a long time since this string started and it is nowhere yet finished. Just visit [www.AMVSIR.com](#) and today, December 20, 2015, know that ASR has arrived and it is only getting better. Just around the corner "smart" mics are being designed to work with ASR technology, that means that a digital court reporter or courtroom clerk assigns mics to specific people so the transcript shows Q. and A. for questions and answers, THE COURT:, THE PROSECUTOR, DEFENSE COUNSEL#1, DEFENSE COUNSEL #2, et cetera, and simultaneously sync the audio to the ASR working rough transcript.

Lawyers and their clients will be offered the best deal possible, "Use a 95% or better ASR transcript sync'd to the court's official record, the audio, that you can search, find and play on any smart device, and the cost is just \$1.00 per recorded minute that you can share between and amongst the parties in the cost, or hire your own court reporter at \$400 per day, and \$2.00 per page for a realtime rough draft, and \$10 per per page for daily copy certified transcript?"

It will not take long for the working poor of America to make their choice what delivery system they would prefer and if a final certified transcript is really necessary for an appeal, pay a transcribing editing business \$1.00 per recorded minute to do just that.

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**Kate**

Florida [July 18, 2014](#)

Wow...court reporters have not been needed for some time now..really... I am a working court reporter, I am proud to be a court reporter. People (including my family and friends) have no idea of the amount of skill that is required to perform my role. On my first day of class I was told that only 3% of people who start the course finish it. There were 10 people in my class to start with, that went down to 3. It's a course where 94% in a test is a fail. It is complex, challenging and at the same time very rewarding.

I have no problem with digital recordings/digital reporters/transcribers/voice recognition software but they are nowhere close to what I can produce. Case and point, you are asked a question and you answer "I did it" great a confession, not at all, that would be a question. 'I did it?' a recording can't tell the difference between commentary and a statement and that is only the tip of the iceberg; what about accents, dropping in and out of native tongue, fast talkers, slow talkers the list just goes on. As a reporter in the room if I don't understand what is being said I can request that they slow down/speak more clearly and talk to the speaker later and get spellings if necessary. How does that work if you are in a room transcribing something that happened last week??? I love technology but even writing a few short sentences in a box is a problem for some VRS.

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**Steve**

Washington DC [May 13, 2014](#)

ASR is becoming so good, that the British House of Commons Hansard Debates is going to use it for its committees at first and slowly introduce it on the floor. The Isle of Man has used ASR for sometime now on the floor. I have to ask myself when will their working model be introduced in Congress and the US Senate?

[http://www.isleofman.com/News/details/63726/tynewald-voice-recognition-sy...](#)



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Certification as an NYRCR objectively attests to realtime skill.

- New York Association Certified Reporter (NYACR)

Certification as a NYACR objectively demonstrates overall reporting competence. This test parallels New York State's Certified Shorthand Reporter, in many other states a mandatory prerequisite to work as a court reporter.

**New York Realtime Court Reporter (NYRCR) EXAM****Purpose**

Providing realtime (instant speech to text) display is becoming commonplace, even required, in today's world of "judicial" reporting. It has spawned the related careers of Closed Captioning and CART (Communication Access Realtime Translation) reporting. Others are being developed. Thus, it is increasingly important to verify these skills to the marketplace.

**Format of the Exam**

Type: 3-voice question and answer

Length: 5 minutes

Speed: Variable from 180-200 wpm

Passing: 96 percent

Nature: This is a realtime examination. Grading is based upon the accuracy of realtime transcription without editing. Candidate must set up hardware and software, produce realtime text, label file(s) and provide result on nonreturnable removable medium, and then strictly follow all monitor instructions for removal of content from writer and computer.

Two readings are given consecutively each test day. Candidate may choose which to submit for grading.

This exam is offered two times per year – in the spring and autumn.

**New York Association Certified Reporter (NYACR) EXAM****Purpose**

The State of New York, unlike many others, does not have a mandatory certification or licensure before reporters can work. Following the example of some other states, NYSCRA

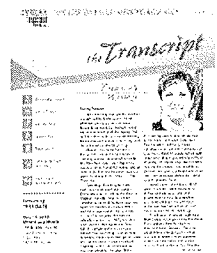
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## Traumatic Brain Injury: Hope Through Research

### Introduction

What is a Traumatic Brain Injury (TBI)?

How does TBI affect the brain?

What are the leading causes of TBI?

What are the signs and symptoms of TBI?

How is TBI diagnosed?

How is TBI treated?

Can TBI be prevented?

What research is NINDS funding?

How is NINDS coordinating research efforts?

How can I support TBI research?

Where can I get more information?

Glossary

### Introduction

Traumatic brain injury (TBI) is the leading cause of death and disability in children and young adults in the United States. TBI is also a major concern for elderly individuals, with a high rate of death and hospitalization due to falls among people age 75 and older. Depending on the severity of injury, TBI can have a lasting impact on quality of life for survivors of all ages – impairing thinking, decision making and reasoning, concentration, memory, movement, and/or sensation (e.g., vision or hearing), and causing emotional problems (personality changes, impulsivity, anxiety, and depression) and epilepsy.

Annually, TBI injuries cost an estimated \$76 billion in direct and indirect medical expenses. The U.S. Centers for Disease Control and Prevention (CDC) statistics for 2010 alone (when the survey was last taken) state:

- TBIs were a factor in the deaths of more than 50,000 people in the United States
- More than 280,000 people with TBI were hospitalized
- 2.2 million people with TBI visited an emergency department <sup>[1]</sup>.

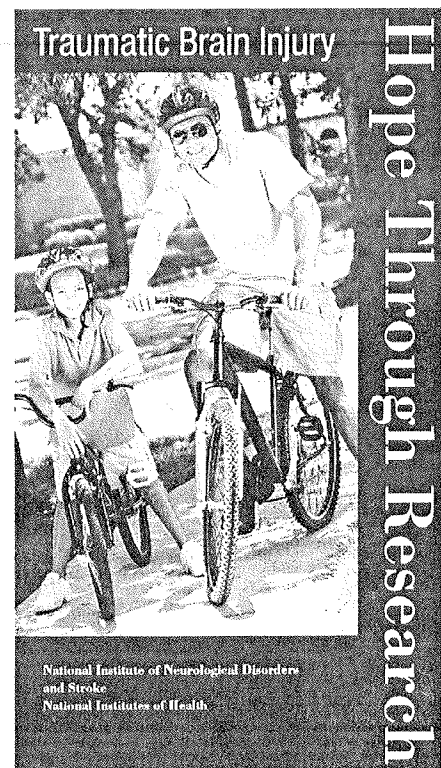
These figures are likely an underestimate of the true number of TBIs as they exclude people who did not seek medical attention at the emergency room. Although approximately 75 percent of brain injuries are considered mild (not life-threatening), as many as 5.3 million people in the United States are estimated to be living with the challenges of long-term TBI-related disability.

Not every TBI is alike. Each injury is unique and can cause changes that affect a person for a short period of time, or sometimes permanently.

The majority of people will completely recover from symptoms related to *concussion* <sup>[2]</sup>, a mild type of TBI. However, persistent symptoms do occur for some people and may last for weeks or months. The long-term effects of TBI may vary depending on the number and nature of "hits" to the head, the age and gender of the individual, the speed with which the person received medical attention, and genetic and other factors.

Over the past few decades preventive measures, such as seatbelts and helmets, and better critical care have substantially increased survival from severe TBI.

Recently, research has expanded from a singular focus on severe TBI to a greater awareness about potential long-term consequences and the need to find better ways to diagnose, treat, and prevent all forms of TBI. Many questions remain unanswered regarding the impact of TBIs, the best treatments, and the most effective methods for promoting recovery of brain function. This publication outlines what is known about TBI, as well as directions for future research.



[Download publication](#)

[1] Traumatic Brain Injury in the United States Fact Sheet. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention. January 12, 2015.

[2] Words in *Italic* appear in a Glossary at the end of this document.

#### top

What is a Traumatic Brain Injury (TBI)?

A TBI occurs when physical, external forces impact the brain either from a penetrating object or a bump, blow, or jolt to the head. Not all blows or jolts to the head result in a TBI. For the ones that do, TBIs can range from mild (a brief change in mental status or consciousness) to severe (an extended period of unconsciousness or amnesia after the injury). There are two broad types of head injuries: penetrating and non-penetrating.

*Penetrating TBI* (also known as *open TBI*) occurs when the skull is pierced by an object (for example, a bullet, shrapnel, bone fragment, or by a weapon such as hammer, knife, or baseball bat). With this injury, the object enters the brain tissue.

*Non-penetrating TBI* (also known as *closed head injury* or *blunt TBI*) is caused by an external force that produces movement of the brain within the skull. Causes include falls, motor vehicle crashes, sports injuries, or being struck by an object. Blast injury due to explosions is a focus of intense study but how it causes brain injury is not fully known.

Some accidents such as explosions, natural disasters, or other extreme events can cause both penetrating and non-penetrating TBI in the same person.

\* Terms in *Italics* are defined in the Glossary.

#### top

How does TBI affect the brain?

TBI-related damage can be confined to one area of the brain, known as a *focal injury*, or it can occur over a more widespread area, known as a *diffuse injury*. The type of injury is another determinant of the effect on the brain. Some injuries are considered *primary*, meaning the damage is immediate. Other consequences of TBI can be *secondary*, meaning they can occur gradually over the course of hours, days, or weeks. These secondary brain injuries are the result of reactive processes that occur after the initial head trauma.

There are a variety of immediate effects on the brain, including various types of bleeding and tearing forces that injure nerve fibers and cause inflammation, metabolic changes, and brain swelling.

- *Diffuse axonal injury (DAI)* is one of the most common types of brain injuries. DAI refers to widespread damage to the brain's white matter. White matter is composed of bundles of axons (projections of nerve cells that carry electrical impulses). Like the wires in a computer, axons connect various areas of the brain to one another. DAI is the result of *shearing* forces, which stretch or tear these axon bundles. This damage commonly occurs in auto accidents, falls, or sports injuries. It usually results from rotational forces (twisting) or sudden deceleration. It can result in a disruption of neural circuits and a breakdown of overall communication among nerve cells, or *neurons*, in the brain. It also leads to the release of brain chemicals that can cause further damage. These injuries can cause temporary or permanent damage to the brain, and recovery can be prolonged.
- *Concussion*— a type of mild TBI that may be considered a temporary injury to the brain but could take minutes to several months to heal. Concussion can be caused by a number of things including a bump, blow, or jolt to the head, sports injury or fall, motor vehicle accident, weapons blast, or a rapid acceleration or deceleration of the brain within the skull (such as the person having been violently shaken). The individual either suddenly loses consciousness or has sudden altered state of consciousness or awareness, and is often called "dazed" or said to have his/her "bell rung." A second concussion closely following the first one causes further damage to the brain — the so-called "second hit" phenomenon — and can lead to permanent damage or even death in some instances.
- *Hematomas* — a pooling of blood in the tissues outside of the blood vessels. Hematomas can develop when major blood vessels in the head become damaged, causing severe bleeding in and around the brain. Different types of hematomas form depending on where the blood collects relative to the *meninges*. The meninges are the protective membranes surrounding the brain, which consist of three layers: *dura mater* (outermost), *arachnoid mater* (middle), and *pia mater* (innermost).
  - *Epidural hematomas* involve bleeding into the area between the skull and the *dura mater*. These can occur with a delay of minutes to hours after a skull fracture damages an artery under the skull, and are particularly dangerous.
  - *Subdural hematomas* involve bleeding between the *dura* and the *arachnoid mater*, and like *epidural*

hematomas exert pressure on the outside of the brain. Their effects vary depending on their size and extent to which they compress the brain. They are very common in the elderly after a fall.

- *Subarachnoid hemorrhage* is bleeding that occurs between the arachnoid mater and the pia mater and their effects vary depending on the amount of bleeding.
- Bleeding into the brain itself is called an *intracerebral hematoma* and damages the surrounding tissue.
- *Contusions* — a bruising or swelling of the brain that occurs when very small blood vessels bleed into brain tissue. Contusions can occur directly under the impact site (i.e., a *coup injury*) or, more often, on the complete opposite side of the brain from the impact (i.e., a *contrecoup injury*). They can appear after a delay of hours to a day.
- *Coup/Contrecoup lesions* — contusions or subdural hematomas that occur at the site of head impact as well as directly opposite the coup lesion. Generally they occur when the head abruptly decelerates, which causes the brain to bounce back and forth within the skull (such as in a high-speed car crash). This type of injury also occurs in *shaken baby syndrome*, a severe head injury that results when an infant or toddler is shaken forcibly enough to cause the brain to bounce back and forth against the skull.
- *Skull fractures* — breaks or cracks in one or more of the bones that form the skull. They are a result of blunt force trauma and can cause damage to the underlying areas of the skull such as the membranes, blood vessels, and brain. One main benefit of helmets is to prevent skull fracture.

The first 24 hours after mild TBI are particularly important because subdural hematoma, epidural hematoma, contusion, or excessive brain swelling (edema) are possible and can cause further damage. For this reason doctors suggest watching a person for changes for 24 hours after a concussion.

- *Hemorrhagic progression of a contusion (HPC)* contributes to secondary injuries. HPCs occur when an initial contusion from the primary injury continues to bleed and expand over time. This creates a new or larger lesion — an area of tissue that has been damaged through injury or disease. This increased exposure to blood, which is toxic to brain cells, leads to swelling and further brain cell loss.
- Secondary damage may also be caused by a breakdown in the *blood-brain barrier*. The blood-brain barrier preserves the separation between the brain fluid and the very small capillaries that bring the brain nutrients and oxygen through the blood. Once disrupted, blood, plasma proteins, and other foreign substances leak into the space between neurons in the brain and trigger a chain reaction that causes the brain to swell. It also causes multiple biological systems to go into overdrive, including inflammatory responses which can be harmful to the body if they continue for an extended period of time. It also permits the release of neurotransmitters, chemicals used by brain cells to communicate, which can damage or kill nerve cells when depleted or over-expressed.
- Poor blood flow to the brain can also cause secondary damage. When the brain sustains a powerful blow, swelling occurs just as it would in other parts of the body. Because the skull cannot expand, the brain tissue swells and the pressure inside the skull rises; this is known as *intracranial pressure (ICP)*. When the intracranial pressure becomes too high it prevents blood from flowing to the brain, which deprives it of the oxygen it needs to function. This can permanently damage brain function.

Additional information about TBI and its causes can be found on the U.S. Centers for Disease Control and Prevention TBI website: <http://www.cdc.gov/TraumaticBrainInjury/>.

## top

What are the leading causes of TBI?

According to data from the Centers for Disease Control and Prevention (CDC), falls are the most common cause of TBIs and occur most frequently among the youngest and oldest age groups. From 2006 to 2010 alone, falls caused more than half (55 percent) of TBIs among children aged 14 and younger. Among Americans age 65 and older, falls accounted for more than two-thirds (81 percent) of all reported TBIs.

The second and third most common causes of TBI are unintentional blunt trauma (accidents that involved being struck by or against an object), followed closely by motor vehicle accidents. Blunt trauma is especially common in children younger than 15 years old, causing nearly a quarter of all TBIs. Assaults account for an additional 10 percent of TBIs, and include abuse-related TBIs, such as head injuries that result from shaken baby syndrome.

Unintentional blunt trauma includes sports-related injuries, which are also a major cause of TBI. Overall, bicycling, football, playground activities, basketball, and soccer result in the most TBI-related emergency room visits. The cause of these injuries does vary slightly by gender. According to the CDC, among children age 10 to 19, boys are most often injured while playing football or bicycling. Among girls, TBI occur most often while playing soccer or basketball or while bicycling. Anywhere from 1.6 million to 3.8 million sports- and recreation-related TBIs are estimated to occur in the United States annually.

TBIs caused by blast trauma from roadside bombs became a common injury to service members in recent military conflicts. From 2000 to 2014 more than 320,000 military service personnel sustained TBIs, though these injuries were not all conflict related. The majority of these TBIs were classified as mild head injuries and due to similar causes as those that occur in civilians.

Adults age 65 and older are at greatest risk for being hospitalized and dying from a TBI, most likely from a fall. TBI-related deaths in children aged 4 years and younger are most likely the result of assault. In young adults aged 15 to 24 years, motor vehicle accidents are the most likely cause. In every age group, serious TBI rates are higher for men than for women. Men are more likely to be hospitalized and are nearly three times more likely to die from a TBI than women.

#### top

#### What are the signs and symptoms of TBI?

The effects of TBI can range from severe and permanent disability to more subtle functional and cognitive difficulties that often go undetected during initial evaluation. These problems may emerge days later. Headache, dizziness, confusion, and fatigue tend to start immediately after an injury, but resolve over time. Emotional symptoms such as frustration and irritability tend to develop later on during the recovery period. Many of the signs and symptoms can be easily missed as people may appear healthy even though they act or feel different. Many of the symptoms overlap with other conditions, such as depression or sleep disorders. If any of the following symptoms appear suddenly or worsen over time following a TBI, especially within the first 24 hours after the injury, people should see a medical professional on an emergency basis..

People should seek immediate medical attention if they experience any of the following symptoms:

- loss of or change in consciousness anywhere from a few seconds to a few hours
- decreased level of consciousness, i.e., hard to awaken
- convulsions or seizures
- unequal dilation in the pupils of the eyes or double vision
- clear fluids draining from the nose or ears
- nausea and vomiting
- new neurologic deficit, i.e., slurred speech; weakness of arms, legs, or face; loss of balance

Other common symptoms that should be monitored include:

- mild to profound confusion or disorientation
- problems remembering, concentrating, or making decisions
- headache
- light-headedness, dizziness, vertigo, or loss of balance or coordination
- sensory problems, such as blurred vision, seeing stars, ringing in the ears, bad taste in the mouth
- sensitivity to light or sound
- mood changes or swings, agitation (feeling sad or angry for no reason), combativeness, or other unusual behavior
- feelings of depression or anxiety
- fatigue or drowsiness; a lack of energy or motivation
- changes in sleep patterns (e.g., sleeping a lot more or having difficulty falling or staying asleep); inability to wake up from sleep

Diagnosing TBI in children can be challenging because they may be unable to let others know that they feel different. A child with a TBI may display the following signs or symptoms:

- changes in eating or nursing habits
- persistent crying, irritability, or crankiness; inability to be consoled
- changes in ability to pay attention; lack of interest in a favorite toy or activity
- changes in the way the child plays
- changes in sleep patterns
- sadness or depression
- loss of a skill, such as toilet training
- loss of balance or unsteady walking
- vomiting

In some cases, repeated blows to the head can cause *chronic traumatic encephalopathy (CTE)* – a progressive neurological disorder associated with a variety of symptoms, including cognition and communication problems, motor disorders, problems with impulse control and depression, confusion, and irritability. CTE occurs in those with extraordinary exposure to multiple blows to the head and as a delayed consequence after many years. Studies of retired boxers have shown that repeated blows to the head can cause a number of issues, including memory problems, tremors, and lack of coordination and dementia. Recent studies have demonstrated rare cases of CTE in



other sports with repetitive mild head impacts (e.g., soccer, wrestling, football, and rugby). A single, severe TBI also may lead to a disorder called *post-traumatic dementia (PTD)*, which may be progressive and share some features with CTE. Studies assessing patterns among large populations of people with TBI indicate that moderate or severe TBI in early or mid-life may be associated with increased risk of dementia later in life.

### Effects on consciousness

A TBI can cause problems with arousal, consciousness, awareness, alertness, and responsiveness. Generally, there are four abnormal states that can result from a severe TBI:

- *Brain death* – The lack of measurable brain function and activity after an extended period of time is called brain death and may be confirmed by studies that show no blood flow to the brain.
- *Coma* – A person in a coma is totally unconscious, unaware, and unable to respond to external stimuli such as pain or light. Coma generally lasts a few days or weeks after which an individual may regain consciousness, die, or move into a vegetative state.
- *Vegetative state* – A result of widespread damage to the brain, people in a vegetative state are unconscious and unaware of their surroundings. However, they can have periods of unresponsive alertness and may groan, move, or show reflex responses. If this state lasts longer than a few weeks it is referred to as a *persistent vegetative state*.
- *Minimally conscious state* – People with severely altered consciousness who still display some evidence of self-awareness or awareness of one's environment (such as following simple commands, yes/no responses).

### top

#### How is TBI diagnosed?

Although the majority of TBIs are mild they can still have serious health implications. Of greatest concern are injuries that can quickly grow worse. All TBIs require immediate assessment by a professional who has experience evaluating head injuries. A neurological exam will assess motor and sensory skills and the functioning of one or more cranial nerves. It will also test hearing and speech, coordination and balance, mental status, and changes in mood or behavior, among other abilities. Screening tools for coaches and athletic trainers can identify the most concerning concussions for medical evaluation.

Initial assessments may rely on standardized instruments such as the **Acute Concussion Evaluation (ACE)** form from the Centers for Disease Control and Prevention or the **Sport Concussion Assessment Tool 2**, which provide a systematic way to assess a person who has suffered a mild TBI. Reviewers collect information about the characteristics of the injury, the presence of amnesia (loss of memory) and/or *seizures*, as well as the presence of physical, cognitive, emotional, and sleep-related symptoms. The ACE is also used to track symptom recovery over time. It also takes into account risk factors (including concussion, headache, and psychiatric history) that can impact how long it takes to recover from a TBI.

When necessary, medical providers will use brain scans to evaluate the extent of the primary brain injuries and determine if surgery will be needed to help repair any damage to the brain. The need for imaging is based on a physical examination by a doctor and a person's symptoms.

Computed tomography (CT) is the most common imaging technology used to assess people with suspected moderate to severe TBI. CT scans create a series of cross-sectional x-ray images of the skull and brain and can show fractures, hemorrhage, hematomas, hydrocephalus, contusions, and brain tissue swelling. CT scans are often used to assess the damage of a TBI in emergency room settings.

Magnetic resonance imaging (MRI) may be used after the initial assessment and treatment as it is a more sensitive test and picks up subtle changes in the brain that the CT scan might have missed.

Unlike moderate or severe TBI, milder TBI may not involve obvious signs of damage (hematomas, skull fracture, or contusion) that can be identified with current neuroimaging. Instead, much of what is believed to occur to the brain following mild TBI happens at the cellular level. Significant advances have been made in the last decade to image milder TBI damage. For example, diffusion tensor imaging (DTI) can image white matter tracts, more sensitive tests like fluid-attenuated inversion recovery (FLAIR) can detect small areas of damage, and susceptibility-weighted imaging very sensitively identifies bleeding. Despite these improvements, currently available imaging technologies, blood tests, and other measures remain inadequate for detecting these changes in a way that is helpful for diagnosing the mild concussive injuries.

Neuropsychological tests to gauge brain functioning are often used in conjunction with imaging in people who have suffered mild TBI. Such tests involve performing specific cognitive tasks that help assess memory, concentration, information processing, executive functioning, reaction time, and problem solving. The *Glasgow Coma Scale* is the most widely used tool for assessing the level of consciousness after TBI. The standardized 15-point test measures a

person's ability to open his or her eyes and respond to spoken questions or physical prompts for movement. A total score of 3-8 indicates a severe head injury; 9-12 indicates moderate injury; and 13-15 is classified as mild injury. (For more information about the scale, see <http://glasgowcomascale.org/> ).

Many athletic organizations recommend establishing a baseline picture of an athlete's brain function at the beginning of each season, ideally before any head injuries have occurred. Baseline testing should begin as soon as a child begins a competitive sport. Brain function tests yield information about an individual's memory, attention, and ability to concentrate and solve problems. Brain function tests can be repeated at regular intervals (every 1 to 2 years) and also after a suspected concussion. The results may help health care providers identify any effects from an injury and allow them make more informed decisions about whether a person is ready to return to their normal activities.

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#### **How is TBI treated?**

Many factors, including the size, severity, and location of the brain injury, influence how a TBI is treated and how quickly a person might recover. One of the critical elements to a person's prognosis is the severity of the injury. Although brain injury often occurs at the moment of head impact, much of the damage related to severe TBI develops from secondary injuries which happen days or weeks after the initial trauma. For this reason, people who receive immediate medical attention at a certified trauma center tend to have the best health outcomes.

#### **Treating mild TBI**

Individuals with mild TBI, such as concussion, should focus on symptom relief and "brain rest." In these cases, headaches can often be treated with over-the-counter pain relievers. People with mild TBI are also encouraged to wait to resume normal activities until given permission by a doctor. People with a mild TBI should:

- Make an appointment for a follow-up visit with their health care provider to confirm the progress of their recovery.
- Inquire about new or persistent symptoms and how to treat them.
- Pay attention to any new signs or symptoms even if they seem unrelated to the injury (for example, mood swings, unusual feelings of irritability). These symptoms may be related even if they occurred several weeks after the injury.

Even after symptoms resolve entirely, people should return to their daily activities gradually. Brain functionality may still be limited despite an absence of outward symptoms. Very little is known about the long-term effects of concussions on brain function. There is no clear timeline for a safe return to normal activities although there are guidelines such as those from the **American Academy of Neurology** and the **American Medical Society for Sports Medicine** to help determine when athletes can return to practice or competition. Further research is needed to better understand the effects of mild TBI on the brain and to determine when it is safe to resume normal activities.

Preventing future concussions is critical. While most people recover fully from a first concussion within a few weeks, the rate of recovery from a second or third concussion is generally slower.

In the days or weeks after a concussion, a minority of individuals may develop *post-concussion syndrome (PCS)*. People can develop this syndrome even if they never lost consciousness. The symptoms include headache, fatigue, cognitive impairment, depression, irritability, dizziness and balance trouble, and apathy. These symptoms usually improve without medical treatment within one to a few weeks but some people can have longer lasting symptoms.

In some cases of moderate to severe TBI, persistent symptoms may be related to conditions triggered by imbalances in the production of hormones required for the brain to function normally. Hormone imbalances can occur when certain glands in the body, such as the pituitary gland, are damaged over time as result of the brain injury. Symptoms of these hormonal imbalances include weight loss or gain, fatigue, dry skin, impotence, menstrual cycle changes, depression, difficulty concentrating, hair loss, or cold intolerance. When these symptoms persist 3 months after their initial injury or when they occur up to 3 years after the initial TBI, people should speak with a health care provider about their condition.

#### **Treating severe TBI**

Immediate treatment for the person who has suffered a severe TBI focuses on preventing death; stabilizing the person's spinal cord, heart, lung, and other vital organ functions; and preventing further brain damage. Persons with severe TBI generally require a breathing machine to ensure proper oxygen delivery and breathing.

During the acute management period, health care providers monitor the person's blood pressure, flow of blood to the brain, brain temperature, pressure inside the skull, and the brain's oxygen supply. A common practice called intracranial pressure ICP monitoring involves inserting a special catheter through a hole drilled into the skull.

Doctors frequently rely on ICP monitoring as a way to determine if and when medications or surgery are needed in

order to prevent secondary brain injury from swelling. People with severe head injury may require surgery to relieve pressure inside the skull, get rid of damaged or dead brain tissue (especially for penetrating TBI), or remove hematomas.

In-hospital strategies for managing people with severe TBI aim to prevent conditions including:

- Infection, particularly pneumonia
- deep vein thrombosis (blood clots that occur deep within a vein; risk increases during long periods of inactivity)

People with TBIs may need nutritional supplements to minimize the effects that vitamin, mineral, and other dietary deficiencies may cause over time. Some individuals may even require tube feeding to maintain the proper balance of nutrients.

Following the acute care period, people with severe TBI are often transferred to a rehabilitation center where a multidisciplinary team of health care providers help with recovery. The rehabilitation team includes neurologists, nurses, psychologists, nutritionists, as well as physical, occupational, vocational, speech, and respiratory therapists.

*Cognitive rehabilitation therapy (CRT)* is a strategy aimed at helping individuals regain their normal brain function through an individualized training program. Using this strategy, people may also learn compensatory strategies for coping with persistent deficiencies involving memory, problem solving, and the thinking skills to get things done. CRT programs tend to be highly individualized and their success varies. A 2011 Institute of Medicine report concluded that cognitive rehabilitation interventions need to be developed and assessed more thoroughly.

### **Other factors that influence recovery**

#### **Genes**

Evidence suggests that genetics play a role in how quickly and completely a person recovers from a TBI. For example, researchers have found that apolipoprotein E ε4 (ApoE4) — a genetic variant associated with higher risks for Alzheimer's disease — is associated with worse health outcomes following a TBI. Much work remains to be done to understand how genetic factors, as well as how specific types of head injuries in particular locations, affect recovery processes. It is hoped that this research will lead to new treatment strategies and improved outcomes for people with TBI.

#### **Age**

Studies suggest that age and the number of head injuries a person has suffered over his or her lifetime are two critical factors that impact recovery. For example, TBI-related brain swelling in children can be very different from the same condition in adults, even when the primary injuries are similar. Brain swelling in newborns, young infants, and teenagers often occurs much more quickly than it does in older individuals. Evidence from very limited CTE studies suggest that younger people (ages 20 to 40) tend to have behavioral and mood changes associated with CTE, while those who are older (ages 50+) have more cognitive difficulties.

Compared with younger adults with the same TBI severity, older adults are likely to have less complete recovery. Older people also have more medical issues and are often taking multiple medications that may complicate treatment (e.g., blood-thinning agents when there is a risk of bleeding into the head). Further research is needed to determine if and how treatment strategies may need to be adjusted based on a person's age.

Researchers are continuing to look for additional factors that may help predict a person's course of recovery.

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#### **Can TBI be prevented?**

The best treatment for TBI is prevention. Unlike most neurological disorders, head injuries can be prevented.

According to the CDC, doing the following can help prevent TBIs:

- Wear a seatbelt when you drive or ride in a motor vehicle.
- Wear the correct helmet and make sure it fits properly when riding a bicycle, skateboarding, and playing sports like hockey and football.
- Install window guards and stair safety gates at home for young children.
- Never drive under the influence of drugs or alcohol.
- Improve lighting and remove rugs, clutter, and other trip hazards in the hallway.
- Use nonslip mats and install grab bars next to the toilet and in the tub or shower for older adults.
- Install handrails on stairways.
- Improve balance and strength with a regular physical activity program.
- Ensure children's playgrounds are made of shock-absorbing material, such as hardwood mulch or sand.

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### What research is NINDS funding?

The mission of the National Institute on Neurological Disorders and Stroke (NINDS) is to seek fundamental knowledge about the brain and nervous system and use that knowledge to reduce the burden of neurological disease. The NINDS is a component of the National Institutes of Health (NIH), the leading supporter of biomedical research in the world. NINDS funds research on the full range of severity of TBI to understand the mechanisms that result in immediate and delayed effects in the brain and to develop therapies that can prevent or reverse brain damage.

NINDS-supported researchers are working to better understand the factors that contribute to chronic traumatic encephalopathy (CTE). Brain tissue studies suggest that people with CTE have abnormal microscopic deposits of a protein known as tau. Accumulations of tau are also found in the brains of people known to have other neurodegenerative disorders such as Alzheimer's disease. NINDS-funded researchers are working to define a clear set of criteria for the various stages of CTE and to distinguish it from Alzheimer's and other neurodegenerative disorders in post-mortem brain tissue. Once researchers characterize CTE in brain tissue they may then be able to correlate certain changes with findings from advanced brain scanning technologies. If this were possible then individuals with CTE would be able to be diagnosed while they are still alive. One promising research strategy uses a radioactive biochemical substance known as a ligand to bind to tau, which can then be detected using positron emission tomography (PET scan).

It is currently not known how many people either have CTE or are at greatest risk for developing the condition. Researchers are conducting studies to better understand the lasting effects of a single head injury vs. repetitive injuries to the brain, how repetitive TBI might lead to CTE, and how commonly these changes occur among adults. A key objective is to identify and develop noninvasive ways of detecting and monitoring brain injuries. For example, NINDS researchers are currently working to develop consensus criteria for diagnosis as well as objective biomarkers (signs that may indicate risk of a disease and aid in diagnosis) for CTE in order to detect this and similar disorders in living people.

The NIH has also funded research to develop sensors to determine the type of acceleration and rotation that can lead to brain injuries. Researchers hope these sensors can help determine the effect of head injuries over time on cognitive performance and aid in new ways to diagnose concussions.

NINDS, along with the NIH's National Institute of Mental Health and the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, supports the NIH NeuroBioBank (NBB) (<https://neurobiobank.nih.gov>). The repository brings together multiple stakeholders to enable and advance research by collecting and distributing human post-mortem brain tissue. This research improves our understanding of the long-term consequences of brain trauma and the development of conditions such as CTE.

Other studies focus on substances found in the body or in nature that are believed to prevent cell death and inflammation. For example, naturally occurring substances in plants called flavonoids have been shown to reduce inflammation and cell toxicity.

### Clinical trials

Despite recent progress in understanding what happens in the brain following TBI, more than 30 large clinical trials have failed to identify specific treatments that make a dependable and measurable difference in people with TBI. A key challenge facing doctors and scientists is the fact that each person with a TBI has a unique set of circumstances based on such multiple variables as the location and severity of the injury, the person's age and overall health, and the time between the injury and the initiation of treatment. These factors, along with differences in care across treatment centers, highlight the importance of coordinating research efforts so that the results of potential new treatments can be confidently measured.

Among such efforts to coordinate researchers worldwide is the **International Initiative for Brain Injury Research** (InTBIR), a collaboration between the NIH, the European Commission, and the Canadian Institutes of Health Research. The U.S. Department of Defense (DOD) also participates. InTBIR's goal is to advance TBI research by establishing and promoting the use of consistent standards for TBI clinical data collection. One component of InTBIR that NINDS supports is the Transforming Research and Clinical Knowledge in Traumatic Brain Injury (TRACK-TBI) study. This large, multi-center study aims to test, refine, and develop standards and best practices for TBI research across the entire spectrum of TBI severity among adults. TRACK-TBI has a sister study in Europe called Collaborative European NeuroTrauma Effectiveness Research in TBI (CENTER-TBI). Researchers hope that these projects have the potential to substantially advance and revolutionize TBI clinical research. InTBIR is also building a large registry of people with TBI to track the results of various treatment strategies over time.

NINDS-funded researchers are also coordinating a large international study aimed at evaluating treatments for children with moderate to severe TBI. Most of the treatments for TBI are based on studies involving adults. Children are rarely included in research studies so the best course of treatment in pediatric TBI cases is often not clear. The five-year study, called the Approaches and Decisions for Acute Pediatric TBI (ADAPT) Trial, aims to develop



evidence-based guidelines that can immediately improve recovery and disability rates among children with TBI. The study will include 1,000 children from more than 36 locations in the United States and abroad. Researchers are looking at the effectiveness of immediate interventions, such as lowering intracranial pressure, as well as strategies to prevent secondary injuries and deliver nutrients to the brain.

NINDS is also leading the establishment of a collaborative emergency care research network, Strategies to Innovate Emergency Care Clinical Trials (SIREN). SIREN will be responsible for simultaneously conducting at least four large clinical trials that focus on improving care in emergency room settings for individuals suffering from traumatic and medical conditions, including TBI. Other participating NIH organizations are the National Heart, Lung and Blood Institute, the National Center for Advancing Translational Science, and the Office of Emergency Care Research in the National Institute of General Medical Sciences.

### **Animal models**

NINDS-supported researchers conduct numerous studies using animal models in order to test potential new therapies and to better understand the nature of TBI.

One major challenge to delivering drug therapies for TBI is dealing effectively with the blood-brain barrier. This important barrier plays a key role in protecting the brain from potentially harmful substances. However, it also limits the ability of potentially beneficial agents from reaching the brain. Researchers are exploring ways of combining neuroprotective agents with membrane transporters that are able to carry medications across the blood-brain barrier.

Other researchers are exploring ways to promote the brain's innate ability to adapt and repair itself, known as *neuroplasticity*. For example, they are stimulating deep brain structures with electricity or magnetic fields and combining such therapy with exercises to see if it improves functionality in animals with TBI.

A newly developed mouse model of TBI is enabling researchers to look at potential treatments for concussion. Using the model, they found that applying glutathione (an antioxidant that is normally found in our cells) directly on the skull surface after brain injury reduced the amount of brain cell death.

In addition to NINDS, other NIH Institutes fund research on TBI. Among them, the National Center for Medical Rehabilitation Research (NCMRR) coordinates rehabilitation research; the National Institute on Drug Abuse supports investigations into TBI and drug abuse; the National Institute of Biomedical Imaging and Bioengineering funds studies on head impact detection technologies, imaging technologies, regenerative medicine, and prosthetics; and the National Institute of Mental Health supports research on post-traumatic stress disorder associated with TBI. Research projects on TBI and other disorders can be found using **NIH RePORTER**, a searchable database of current and past research projects supported by NIH and other federal agencies. RePORTER also includes links to publications from these projects and other resources.

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How is NINDS coordinating research efforts?

Harnessing the efforts of the many physicians and scientists working on developing better treatments for TBI requires everyone to collect the same types of information from people including details about injuries and treatment results. To lay the groundwork for these studies, NINDS started the **Common Data Elements** (CDEs) project. This effort brings the research community together to develop data collection standards.

Closely linked to the CDEs project is the data sharing platform, **Federal Interagency Traumatic Brain Injury Research (FITBIR)**. Born out of a partnership between DOD and NIH, the database provides a central repository for information on TBI and allows researchers to compare study results worldwide. With FITBIR researchers can collectively pursue answers to common problems. Together, FITBIR and the Common Data Elements project provide the tools that make large-scale research on TBI possible.

NINDS, NIH, and DOD recently assembled a working group of more than 30 experts to develop a set of **Sports-Related Concussion CDEs** for use in clinical research.

NINDS also works with DOD and the Departments of Health and Human Services, Veterans Affairs, and Education to coordinate TBI research for military members. This National Research Action Plan (NRAP) aims to improve prevention, diagnosis, and treatment of TBI and other mental health conditions such as PTSD that affect veterans and their families. The findings resulting from NRAP will be rapidly translated into new effective prevention strategies and clinical innovations, as well as identify biomarkers to detect these disorders early and accurately.

Expediting the development of better treatments for TBI also requires collaboration between private and public organizations dedicated to preventing and managing the consequences of TBI. NIH, through its Foundation for NIH, has built an innovative private-public partnership known as the Sports and Health Research Program (SHRP). Through SHRP, the National Football League has committed millions of dollars to furthering TBI research to improve the lives of all athletes.

SHRP projects include developing and testing a portable eye tracking instrument that can be used on the sidelines to help diagnose concussions and monitor injury progression. SHRP-funded investigators also are looking at other options for detecting mild TBI brain changes with biomarkers such as those on imaging or by measuring levels of substances in the blood. The potential to improve TBI care through these projects will extend beyond the athletic field and be of value to anyone who sustains a TBI.

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How can I support TBI research?

If you or someone you know has been diagnosed with a TBI, enrolling in a clinical trial or brain bank are the best ways to support research toward new and better treatment options.

Clinical trials are research studies that involve people. Studies involving individuals with TBI and healthy individuals offer researchers the opportunity to greatly increase our knowledge of TBI and find better ways to safely detect, treat, and ultimately prevent TBI. By participating in a clinical study, healthy individuals and those with TBI can greatly benefit the lives of those living with this disorder. Talk with your doctor about clinical studies and help to make the difference in the quality of life for all people with TBI. Trials take place at medical centers across the United States and elsewhere. For information about NINDS-funded studies on TBI, see [www.clinicaltrials.gov](http://www.clinicaltrials.gov) and search for "TBI AND NINDS." For additional studies on TBI and information about participating in clinical studies, visit the "NIH Clinical Trials and You" website at ([www.nih.gov/health/clinicaltrials](http://www.nih.gov/health/clinicaltrials)). Always talk with your health care provider before enrolling in a clinical trial.

People with a TBI also can support TBI research by designating the donation of brain tissue before they die. The study of human brain tissue is essential to increasing the understanding of how the nervous system functions.

The NIH NeuroBioBank is an effort by the National Institutes of Health to coordinate the network of brain banks it supports in the United States to facilitate advances in research through the collection and distribution of post-mortem brain tissue. Stakeholder groups include brain and tissue repositories, researchers, NIH program staff, information technology experts, disease advocacy groups, and most importantly individuals seeking information about opportunities to donate. It ensures protection of the privacy and wishes of donors. Creating a network of these centers makes it more likely that precious tissue can be made available to the greatest number of scientists. Six current brain and tissue repositories include:

#### **University of Miami Brain Endowment Bank**

University of Miami Department of Neurology  
1951 N.W. 7th Avenue, Suite 240  
Miami, FL 33136  
**305-243-6219**  
**800-862-7246**

#### **University of Maryland Brain and Tissue Bank**

(formerly NICHD Brain and Tissue Bank for Developmental Disorders)  
University of Maryland, School of Medicine  
655 West Baltimore Street, Room 13-0313 BRB  
Baltimore, MD 21201-1559  
**410-706-1755**  
**800-847-1559**

#### **Harvard Brain Tissue Resource Center**

McLean Hospital  
115 Mill Street  
Belmont, MA 02478  
**617-855-2400**  
**800-272-4622**

#### **The Human Brain and Spinal Fluid Resource Center (HBSFRC)**

Building 212, Room 16  
West Los Angeles Health Care Center  
11301 Wilshire Blvd. (127A)  
Los Angeles, CA 90073  
**310-268-3536**  
Pager: **310-636-5199**

#### **Mount Sinai NIH Brain and Tissue Repository**

James J. Peters VA Medical Center  
130 West Kingsbridge Road

Room 4F-33A  
Bronx, NY 10468  
**718-584-9000** x6083

**Brain Tissue Donation Program at the University of Pittsburgh**

Translational Neuroscience Program  
Biomedical Service Tower 1654  
3811 O'Hare Street  
Pittsburgh, PA 15213-2582  
**412-383-8548**

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Where can I get more information?

For more information on neurological disorders or research programs funded by the National Institute of Neurological Disorders and Stroke, contact the Institute's Brain Resources and Information Network (BRAIN) at:

BRAIN  
P.O. Box 5801  
Bethesda, MD 20824  
**800-352-9424**  
**<http://www.ninds.nih.gov>**

Information also is available from the following organizations:

**Brain Injury Association of America, Inc.**

1608 Spring Hill Rd  
Suite 110  
Vienna, VA 22182  
**[braininjuryinfo@biausa.org](mailto:braininjuryinfo@biausa.org)**  
**<http://www.biausa.org>**  
Tel: **703-761-0750**; **800-444-6443**  
Fax: **703-761-0755**

**Brain Injury Resource Center**

P.O. Box 84151  
Seattle, WA 98124  
**[brain@headinjury.com](mailto:brain@headinjury.com)**  
**<http://www.headinjury.com>**  
Tel: **206-621-8558**  
Fax: **206-329-4355**

**Brain Trauma Foundation**

1999 S. Bascom Avenue  
Suite 1040  
Campbell, CA 95008  
**[infogroup@braintrauma.org](mailto:infogroup@braintrauma.org)**  
**<http://www.braintrauma.org>**  
Tel: **408-369-9735**  
Fax: **408-369-9865**

**Family Caregiver Alliance/ National Center on Caregiving**

785 Market St.  
Suite 750  
San Francisco, CA 94103  
**[info@caregiver.org](mailto:info@caregiver.org)**  
**<http://www.caregiver.org>**  
Tel: **415-434-3388**; **800-445-8106**  
Fax: **415-434-3508**

**National Rehabilitation Information Center (NARIC)**

8400 Corporate Drive  
Suite 500  
Landover, MD 20785  
**[naricinfo@heitechservices.com](mailto:naricinfo@heitechservices.com)**